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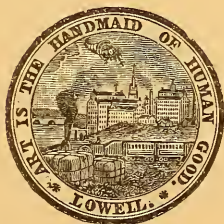
OF THE

CITY OF LOWELL

MASSACHUSETTS

FOR THE

YEAR 1912 - 1913



LOWELL, MASS.

BUCKLAND PRINTING CO.  72-74 MIDDLE STREET

1914

CHARLES Y 119

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## EXTRACT FROM THE ORDINANCES OF LOWELL

### CHAPTER VIII.—CITY DOCUMENTS.

SECTION 5. All City Documents (except the Rules and Regulations for the Government of the Police and Fire Departments) shall be printed in pamphlet form of the size of the Annual Report of the School Committee.

SECTION 6. All City Documents shall be bound together in one volume, under the direction of the City Clerk, and three or more copies shall be placed in the City Library, and one copy in the library of the Middlesex Mechanics' Association, one copy shall be sent to each City of the Commonwealth, to the library of the Harvard College, the Public Library of Boston, the State Library, the Smithsonian Institute at Washington, and the Old Residents' Historical Association of Lowell.

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# INAUGURAL ADDRESS

OF

JAMES E. O'DONNELL

MAYOR

LOWELL, MASSACHUSETTS

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Monday, January 6, 1913



BUCKLAND PRINTING COMPANY



# Mayor's Inaugural Address

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*Gentlemen of the Municipal Council:*

With the introduction of the new system of municipal government, popularly known as the commission form, with its two year terms of office and its continuity of policy, the day of the annual inauguration and its accompanying inaugural address, abounding in bewildering statistics and Utopian recommendations has passed into history, for immediately upon the administering of the oath of office to the newly elected officials, the city's business is taken up, without interruption, where it was left off at the end of the preceding year.

The new charter and the induction into office of the newly-elected mayor and commissioners in January, 1912, made radical changes in the conduct of the city's business. The plan adopted provided for a commission, the members of which should devote all their time, or nearly all, to the duties of their respective offices, and as a result most of them have become thoroughly familiar with the operation, need and detail of their respective departments together with acquiring a general knowledge of all the departments.

The mail of the mayor's office throughout the year has been filled with inquiries as to the success of the plan under which we are operating. Much time and attention have been given in replying to these inquiries. Standing at my window in the mayor's office I have seen passing by, the business man, the capitalist, men of influence and property, mill managers and operatives all hurrying on to provide for themselves, their

families and futures and paying no attention to political affairs, not one of them even looking toward the building in which five men are entrusted with the common interest of all. Many times during the year in the company of substantial men of affairs have I heard my colleagues and myself adversely criticised for alleged sins of commission and omission, the criticism almost invariably displaying the lack of knowledge of the critic. I propose, therefore, at this time, to give a brief, general history of the city during the first year of its existence under the commission form of government, hoping that our citizens will read it carefully. Our system is in an experimental stage; experience with it, suggests from time to time certain changes. These will be made more apparent to the people and those connected with the city's affairs, by longer and riper experience. Glancing backward down the pathway of past accomplishments, I believe that most of us, at least, are entitled to the approbation of the people for having made sincere and intelligent endeavors toward the advancement of our civic interests, and that what we have done in this direction we have done honestly and to the best of our ability under the circumstances. The city has a right to require of us larger service in the future because of the experience and knowledge of the city's necessities and requirements which have come to us during the year just closed, but as I remarked, one year ago upon assuming office, we have been and are building for the future, and material results can hardly be expected in the comparatively short period of one year.

We entered upon our duties handicapped by a most discouraging legacy of debt. Some of our critics have expected us to remove this accumulation of a generation in one year, an utter impossibility, and in that respect we have not satisfied

them. But reasonable men, those who take the trouble to familiarize themselves with city affairs, understand our position, and, I believe, are ready to give us credit wherever we have deserved it.

One of the advantages claimed for our new charter was that it would expedite the city's business, and this advantage has been proven time and again since the start. Instead of the old and tedious manner of getting business through the two branches in concurrence, with the delay of committee approval in between, the commission has met weekly and sometimes oftener, and in many cases the discussion of one hour has decided important improvements which heretofore would take months of deliberation and log-rolling. As an illustration, a health department stable that had been a favorite topic of discussion and contention, annually, for a decade, was proposed, planned, constructed and completed within a six-month. Along with the promptness with which business has been conducted under the new system, there has been a co-operation among the different departments which, while its effect has not been apparent to the outside world, has materially assisted the work of the departments and has reduced their respective expenses in a considerable degree.

At the beginning of the year, on account of the financial condition of the city, great care was exercised in the making of the annual appropriations, and it was necessary to cut deeply some of the estimates made by the commissioners. During the year, unforeseen emergencies have arisen in some of the departments for which no provision had been made at the beginning of the year when the appropriations were apportioned. A section of the charter makes it an offence, punishable by fine or imprisonment, to overrun an appropriation, and hence most of the commissioners exercised the greatest

caution in the handling of the money entrusted to them. In one notable instance, the commissioner by strict economy so greatly reduced the cost of his department as to be enabled to spend \$19,000 on permanent improvements which otherwise would have necessitated a loan

Many people, not familiar with civic affairs, look for a decrease in the annual expenditures as the only indication of good management, but there are many departments in which the fixed charges are bound to increase, annually, as the population of the city increases, and these departments must of necessity show an increased expenditure each year regardless of how prudently their affairs may be administered.

With the experience of one year to guide us, and a change in the designation of the head of the street department, greater results may be expected in the year 1913.

I have several recommendations to make relative to improvements which may come in 1913, as have some of the other commissioners and these will appear in connection with the resume of the work of the several departments which I am about to take up. Again, I will state that this is but a general review of the year and does not go into statistics which will be found in the department reports.

## THE POLICE DEPARTMENT

The mayor as commissioner of public safety is head of the police department, and after the experience of one year, he can say with honest pride, that for discipline, harmony and good results it ranks with any department of a similar nature in New England. The divorce of the police-licence commission was one of the real good things of the new charter.



Although, while one of the poorest paid police departments in the State, its members were last year denied an increase of pay on account of circumstances over which the mayor had no control at that time, they accepted the setback in philosophical and man-like manner, and when shortly afterward an unprecedented emergency arose, the invasion of the I. W. W. and the subsequent mill strike, they went forth and controlled a most threatening situation in a manner that excited the admiration of all New England. It is my purpose to increase the pay of the patrolmen, 25 cents per day, placing them on a \$3 basis, in common with the majority of the cities of the Commonwealth. I believe that an increase of pay should be extended to the superior officers including the superintendent, and shall ask the municipal council for an appropriation sufficiently large to include an increase for all superior officers. I would recommend the appointment of at least five new patrolmen, and with the numbers thus increased I would have the south common patrolled by at least two officers and start the nucleus of a traffic squad with three officers.

## HEALTH DEPARTMENT

In the health department, since the first of April, births have been reported at this office by the city clerk, and the Board of Health has formulated a circular which is sent out, daily, to the parents of new born children, instructing them as to the care and the feeding of infants.

An appropriation was granted for the erection of a new stable for the horses belonging to the health department, which is nearly completed.

An appropriation was obtained for a comfort station which is in process of construction.

A temporary hospital for the care of contagious diseases was provided, which has furnished the board of health facilities for caring for these cases, a convenience the department has needed for many years, as, without a hospital, it has had to depend on the Lowell hospital which has been available for only a very limited number of cases; besides which, the board has had to maintain a large number of cases at their homes, necessitating the providing of medical services, medicine, fuel, provisions, etc.

A depot for anti-toxin was opened at the police station, thus enabling physicians to secure anti-toxin at night and on holidays when the office is closed. A receptacle was installed at the Moody Street entrance to city hall for the reception of specimens from physicians to be examined by the bacteriologist, at such times as the office is closed.

In estimating the appropriation, necessary for the health department, at the beginning of the year, the head of the department is seriously handicapped by an obvious lack of knowledge as to what the future is to bring about. Outside of salaries and labor there can be no fixed charges considered in this department. As an example we have the present scarlet fever epidemic, which was entirely unexpected and the cost of which could not be estimated in advance.

### AMBULANCE SERVICE

The ambulance service has been efficiently conducted at a reasonable expense to the city. To increase its efficiency, I would recommend the purchase of an automobile ambulance which would be of inestimable benefit in accident and emergency cases as well as in cases of long runs.

## CHARITY DEPARTMENT

The charity department is another important department in which it is absolutely impossible to estimate the probable expenditures in advance. Prudence without parsimony has been the rule in the administration of the affairs of this department. In the care of the poor and aged none would practice strict economy, yet extravagance is not necessary. In the outdoor relief department no worthy case was refused nor were curtailments of any kind made. At the Chelmsford Street hospital, which now is a hospital in fact, practically the entire appropriation was used on the maintenance of the inmates, of whom the daily average was 403, the number admitted during the year being 840. There were 12 births at the institution and 104 deaths. Of the latter, a large majority were in practically a dying condition upon entering. The farm, agriculturally, had a fairly prosperous year, the products being used by the institution. In regard to this feature of the institution, one of its needs is an ensilage blower and cutter, which will entail an expenditure of about \$600 but which will pay for itself within a year. For improvements at the farm, I would recommend the installation of electric lights in the rooms of the women's hospital and a new and modernly equipped operating room which may be installed during the coming year. The institution has an asset that might be turned into money, in a lot of land, located on Chelmsford street opposite Crescent, which is of no value as farm land but which would bring a respectable price for building purposes if placed on the market.

## OTHER SUB-DEPARTMENTS

The city's insurance has been placed in charge of the commissioner of public safety during the year. In addition to renewing all expiring policies, insurance was placed on the police station building and its equipment for the first time in the history of the city. The equipment of the Industrial school and the new health department stable have also been insured, while additional insurance has been placed on city hall.

Owing to the newness of the system and conditions generally, the law department has been given an unprecedented amount of work.

While the matter of claims against the city was voted to the personal charge of the commissioner of public safety, on account of the fact that most of the more important departments are involved in many of these claims, the commissioner of public safety has called the entire municipal council to his assistance in the consideration of them.

The funds of the State aid department have been discreetly apportioned so that not only the necessities, but often the comforts of life are given the more needy ones who are entitled to its benefits.

## WATER DEPARTMENT

The public is still discussing the elaborate New Year's gift of the water department to the water takers and to its laboring force, which was announced in the daily press, a few days ago, namely, the reduction of water rate and the increase of wages, but in the opinion of the commissioner in charge of that department the most important feature of the work of the

past year is the solution of the long discussed problem of improving the water service in the Highland district, the work on which is now under way. This work has been started by the laying of a large main through Dutton and Adams streets which, when completed, will increase many times the volume of water available for the Highland district. As a further means for giving the Highlands better domestic service and fire protection, the commissioner recommends strongly the extension of the 18 inch line from its present terminus, put in this year, at Central and Church streets, along Appleton street across the tracks as far as Howard street.

The laying of a large supply main from the West Sixth street pumping station down along West Sixth street, across the river at Aiken street to connect with the 20 inch main that now goes through Cabot and Adams streets, so that the city may have two connections across the river where it now has but one, is another improvement which the coming year in all probability will see installed.

During the past year, the water department has taken over the care and maintenance of meters and has reduced their selling price to the water-takers. The department has also cut down the cost to house-owners of service pipes, 33 1-3 per cent., and as was remarked before, it has also announced a reduction in water rates and an increase in wages.

## FIRE DEPARTMENT

Perhaps the most striking feature of the conduct of the affairs of the fire department during the past year is the fact that the commissioner has supplied the city with \$19,000 worth of automobile fire apparatus without borrowing a dollar



for their purchase. These machines were paid for upon their acceptance by the department in contrast to the machine now operated by the chief of the department which was purchased on a ten year loan, and will not be paid for until 1921, years after the machine itself will have outlived its usefulness, while ten years' interest will have been added to the nominal cost. It is the intention of the municipal council to increase the number of auto fire trucks, for by their use the efficiency of the department is greatly increased.

The municipal council will be asked to abolish the Warren street fire house and install the protective company in the Palmer street house, where it will be as centrally located, and where there is sufficient space for its reception. Thus the city may dispose of the Warren street house or use it for other purposes, while the department will save the cost of its maintenance.

The fire commissioner is firmly of the opinion that there should be a reduction of insurance rates in Lowell and that the underwriters contribute to the maintenance of the protective department, as is done in other cities. The protective department is often called for protection against losses other than those caused by fire.

## STREETS AND HIGHWAYS

The department of streets and highways, as conducted during the past year, might give the skeptic ground for an argument against the superiority of the new system of government over the old, but under different management there is ample opportunity to make as good a showing in that department as in any other, without any curtailment in the number



of men employed or the amount of wages paid to the laborers. As the department with the greatest amount of patronage and that which offers a livelihood to the greatest number of laborers, it is to be expected that this department is not to be niggardly in its expenditures for labor, but care should always be exercised that the money is judiciously spent. Unnecessary positions at large salaries will bring any department into disrepute, as will bare-faced extravagance of any kind. Neglect to send out assessments from this department resulted in a shortage in the general treasury fund which resulted in the painful necessity of borrowing more money toward the close of the year.

During the year new macadam work was done to the extent of 17,256.6 square yards, extending in length about 6300 feet, or one and one-fifth miles, and of this amount 3661.6 square yards was oiled. The repair work amounted to 43,554.5 square yards or about three and one-fifth lineal miles. On this work about 16,000 square yards was oiled. This macadam work extended over almost every section of the city. At the present time Lowell has 36,084 miles of macadamized streets, of which 2.85 miles is oiled. A municipal concrete plant was in operation during the year and almost all of the concrete work of the street department was done by this plant.

During the year 7019 lineal feet of grouted blocks on a concrete foundation have been laid, or about one and one-third miles or 22,500 square yards, and at the present time there are about four and one-third miles, covering an area of 97,373 square yards of this up-to-date pavement. The year of 1913 should show an increase in our smooth paved granite block streets, and the policy should be as heretofore, from the entire center of the city outward. In the matter of macadamizing, a change should be made so that no street should be

macadamized unless oiled at the same time, making a charge to the abutters similar to the street watering assessment.

More sidewalks should be built, as they are permanent improvements which benefit the citizen and the city alike, at a small cost to the city. For the removal of dust that will accumulate to some extent, scrubbing or washing the street surface with water is considered a very effective method. The ideal system of street cleaning, therefore, would be sufficient patrol or hand-cleaning during the day, with an occasional scrubbing with "squeegee" machines, so-called, or else with the hand-cleaning to flush the surface with water under strong pressure at night. The use of the "squeegee" or the flushing would be needed only every four or five days at the most. The cost of such work, it has been shown by experiments elsewhere, is comparatively small.

I would recommend that the main approaches to the city be placed in proper condition, and in that connection I am strongly in favor of the widening of Rogers street from the junction of Nesmith to Boylston street, and I recommend the construction of a new and modern bridge over the Merrimack river at Pawtucket falls.

The engineer's department has seen a busy year and among the works upon which it was employed was the completion of the abolition of the School street grade crossing; the completion of the new high service reservoir; the replacing of the old wooden bridge over the canal in Market street, with a reinforced concrete bridge, and the widening of the street at this point. Some work was done on the extension of the sewer outlets on the Lakeview avenue side of the river. This work should be continued so that every outlet shall be submerged at all times in keeping with the recent advice of the State Board of Health.

The lighting department, under the new form of government, passed from the fire to the street department. Some time ago a lighting proposition was discussed which included a "Great White Way," so called. As the contract read, the city was to assume the entire cost of maintenance, whereas in other cities the abutters assume their share of the cost. For this and other reasons the proposition has not been finally acted upon.

## PUBLIC BUILDINGS

The building department has been very active during the past year, for in addition to the regular repair work necessary to keep the buildings up to the standard, much in the form of work usually let out by contract has been done by this department's mechanics.

In this line might be mentioned the extensive alterations that have been made at the rifle range, where three large barricades and an addition to the target pit have been built; the office building at the Edson cemetery has been moved, enlarged and generally renovated; an addition has been built to the Lincoln street fire house and the second floor of this building has been divided into separate sleeping rooms; with the exception of the addition a similar change has been made to the Fourth street fire house. Excellent temporary quarters have been provided at the city hospital for the cattle, the barn having been destroyed by fire during the summer. Several school buildings have undergone extensive repairs, in many places long looked for improvements have been made.

A large brick stable for the health department has been erected under the direction of this department, while the

comfort station, a long looked for convenience, has been started and will be completed in the early spring.

Besides this work the department has given much attention to building inspection, both regarding the construction of new buildings and the removal of dilapidated and dangerous buildings. Many dangerous buildings have been condemned and torn down during the past year.

### CEMETERY DEPARTMENT

The commissioner in charge of public cemeteries offers the important recommendation that the revenues of that department be given back for use by the department instead of going into the general treasury fund. More money due this department was collected this year than ever before in the history of the city. By a new system inaugurated by the present commissioner the receipts of the department will be even greater next year.

In the Edson cemetery the office building was moved to the main entrance, for the convenience of the department and patrons, and enlarged. A brick vault for records was built and other needed improvements made at an expense of eleven hundred dollars, paid for out of appropriations.

The office building, the iron work in the gateway and fence, the interior and outside trimmings of the chapel were re-painted.

Considerable work has been done to beautify the front of the cemetery. Improvements have been made in the pauper section.

### PARK DEPARTMENT

The annual report of the park commissioners recently published is still fresh in the public mind, I regret, with the members of the

the board, that more money cannot be appropriated for this department. I strongly recommend the establishment of a public playground in West Centralville and an annual appropriation of reasonable amount for the improvement of Shedd park.

## DEPARTMENT OF FINANCE

The department of finance under the commissioner recently retired has done commendable work in all its sub departments. Through the zeal of the commissioner in charge a noticeable improvement is noted in the matter of collection of back taxes which has been felt in the treasurer's office.

## AUDITOR'S DEPARTMENT

The auditor's office, under the new charter and the ordinance passed in October last, has had duties and responsibilities practically doubled and has become one of the most important offices in the city. Among the new duties included are the monthly reports, overdrafts, register of debts, refunds, claims, inventories and the preparing of estimates for the annual budget.

One of the most important is the issuing of the monthly reports showing all the financial transactions of the city during the month and other information of importance and interest to the citizens. These reports can be had at the office at any time.

The new system of collecting revenue is of the utmost importance, as we must have revenue to meet our expenses. In years past all the attention has been given to the expenditures and none to the receipts. The new ordinance, if carried out, as it should be, should increase the revenue, but it needs the hearty co-opera-

tion of all departments to make it a success by reporting promptly all bills and assessments to the auditor's office.

The accounts will be kept hereafter according to the schedule laid out by the census bureau regarding "revenue" and "expense."

The auditor is now required to stop payment of all accounts if the appropriation is likely to be exceeded. Had this authority been given before, the overdrafts from year to year would have stopped.

The records and books in this office are kept in an up-to-date manner and all information is cheerfully given.

## ASSESSORS' DEPARTMENT

The assessors' department in 1912 figured an increase in valuation of \$3,113,580.75.

A great portion of the real estate increase was due to an enhancement of values in the central and business section of the city.

The tax of shares of stock credited to the Commonwealth and different cities and towns was discovered at the tax commissioner's office and the board of assessors appeared before the board of appeals and recovered the same.

The probate records were carefully inspected with satisfactory results, as intangible property heretofore concealed was made known.

The assessors note with considerable satisfaction the liberal dealings of the council in the matter of appropriations, thus enabling them to seek information of value.

At the time of the declaration of the rate the board carefully considered the matter of an increased overlaying for the purpose of helping to meet losses in collections of taxes, such losses being



due to many causes such abatements on the ground of charity, legal exemptions, death, etc., and it was voted that the overlayings be placed at \$26,594.83, an increase of \$22,021.68 over that of the previous year; it was recommended that the above mentioned amount be safeguarded and spent for no other purpose.

## CITY CLERK

As clerk of the municipal council the work of the city clerk has been materially increased, but the affairs of that office have been conducted in an exemplary manner. In connection with the work of this office the city clerk offers the following statement to the physicians of Lowell.

The attention of physicians has already been called to the observance of the requirements of chapter 280 of the Acts of 1912 in the matter of reporting births. One of the provisions of said act is "that the city clerk shall file daily with the board of health a list of all births reported to him," and the city clerk does so.

The purpose of filing a daily list with the board of health, we assume, is that the board may have yearly knowledge of births; of the attending physician; the locality, surroundings, etc., with the view that the board may co-operate with the physicians to decrease the entirely too large mortality of children.

Now unless the physicians report promptly their birth cases, the intent of the law is nullified as to the board of health and the board is thereby not receiving the co-operation of physicians in its endeavors. The city clerk would therefore urge upon physicians the importance of a prompt compliance with the law in this matter, the neglect of such being a liability to a forfeit of twenty-five dollars.

## CONCLUSION

It will be noticed from the foregoing that, notwithstanding the handicap under which the present government entered upon its duties, much has been accomplished, both along the line of progression and in the matter of retrenchment. Some of the departments have not been mentioned, but for these I may state that they have been conducted in a manner satisfactory to the commissioners in charge.

The commissioners would gladly give the public or each section of the public the street, park and other improvements that they desire but in order to establish these desired improvements additional revenues or higher taxes are absolutely necessary, and without these the commissioners must continue to proceed slowly and cautiously with no other purpose than the best interest of the whole community ever foremost in their minds.

EIGHTY-SEVENTH ANNUAL REPORT  
OF THE  
School Committee  
OF THE  
CITY OF LOWELL, MASS.  
AND THE  
FORTY-NINTH ANNUAL REPORT  
OF THE  
Superintendent of Public Schools  
1912



F. A. M. TOBIN'S PRINTERY  
LOWELL, MASS.

1913

## CITY OF LOWELL

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Office of the School Committee,

LOWELL, MASS., March 25, 1913.

At a meeting of the School Committee, held March 25, 1913, it was voted to adopt the report of the Superintendent of Schools for 1912 as the report of the School Committee for that year, and to authorize the printing of the report.

In accordance with this vote the report is herewith submitted.

Hugh J. Molloy,  
Secretary.

ORGANIZATION  
OF THE  
School Committee  
1912

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JOHN C. FARRINGTON, Chairman.  
ARTHUR K. WHITCOMB, Secretary.

---

PATRICK J. BAGLEY, D. M. D., 19 Lombard St.	Term expires 1913
JOHN C. FARRINGTON, 182 Perry St.	" " 1913
CHARLES T. McKENZIE, 101 Coburn St.	" " 1912
JAMES B. O'CONNOR, M. D., 188 Moore St.	" " 1912
JOHN JACOB ROGERS, 444 Andover St.	" " 1912

### STANDING COMMITTEES

- On Teachers**—Dr. Bagley, Mr. Farrington, Mr. McKenzie, Dr. O'Connor, Mr. Rogers.
- On Books and Supplies**—Mr. Farrington, Dr. Bagley, Mr. McKenzie, Dr. O'Connor, Mr. Rogers.
- On Evening Schools**—Mr. McKenzie, Dr. Bagley, Mr. Farrington, Dr. O'Connor, Mr. Rogers.
- On High School**—Dr. O'Connor, Dr. Bagley, Mr. Farrington, Mr. McKenzie, Mr. Rogers.
- On Rules**—Mr. Rogers, Dr. Bagley, Mr. Farrington, Mr. McKenzie, Dr. O'Connor.
- On Finance**—Dr. Bagley, Mr. Farrington, Mr. McKenzie, Dr. O'Connor, Mr. Rogers.
- On School Houses and Hygiene**—Dr. O'Connor, Dr. Bagley, Mr. Farrington, Mr. McKenzie, Mr. Rogers.
- On Industrial School**—Mr. McKenzie, Dr. Bagley, Mr. Farrington, Mr. Rogers, Dr. O'Connor.
- 

### ASSIGNMENT OF SCHOOLS

- Dr. Bagley**—High, Industrial, Bartlett, Pawtucket, Green, Cross street, New Moody street, Lexington avenue, Worthen street, Morrill, Kirk street, Cabot street; Pawtucket and Bartlett Kindergartens.
- Mr. Farrington**—High, Industrial, Colburn, Edson, Colburn Primary, Charles street, Ames street, Central street, Eliot, Cottage street, Chapel street and Charles street Kindergartens.
- Mr. McKenzie**—High, Industrial, Varnum, Greenhalge, Tenth street, West Sixth street, Billings street, Lakeview avenue; Varnum Kindergarten.
- Dr. O'Connor**—High, Industrial, Butler, Lincoln, Highland, Riverside, Franklin, London street, Weed street, Agawam street, Carter street, Lyon street, Howard street, Grand street, Laura Lee, Dover street, Pine street, Middlesex Village; Lincoln, Franklin, Dover street, Laura Lee, Pine street and Agawam street Kindergartens.
- Mr. Rogers**—High, Industrial, Moody, Washington, Pond street, High street, Sycamore street, Powell street; Moody Kindergarten.



## ASSIGNMENT OF EVENING SCHOOLS

Mr. McKenzie—High, Drawing, Cabot St.  
 Mr. Farrington—Greenhalge, Colburn, Edson.  
 Dr. O'Connor—Butler, Green, Franklin.  
 Dr. Bagley—Worthen, Mann, Middlesex Village.  
 Mr. Rogers—Old Moody, Riverside, Howard St.

---

Arthur K. Whitcomb, Superintendent of Public Schools.  
 Office in City Hall.

Office Hours—One hour after the forenoon session of schools  
 and from 10 to 12 o'clock on Saturday forenoon.  
 Telephone 2728. Home Telephone 2030.

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HENRY WILLIAMS, School Supply Agent.  
 Office in School Supply Room, City Hall.  
 Hours—8 a. m. to 12.30 p. m., and 1 to 5 p. m. Office Tele-  
 phone 2727. Home Telephone 2714.

---

WM. F. THORNTON, Supervisor of Janitors.  
 Office, City Hall, Third Floor.  
 Office Hours—12 m. to 1 p. m. Home Telephone 3423.

## TRUANT COMMISSIONERS

WM. F. THORNTON

CAMILLE ROUSSIN, HENRY L. WILLIAMS,  
 JOHN J. WALKER.

Office in City Hall, Third Floor.  
 Office Hours—12m. to 1 p. m. for all the working days of the  
 year.

## REGULAR MEETINGS OF THE SCHOOL COMMITTEE

January 30	February 27	March 26	April 30
May 28	June 25	July 30	August 27
September 24	October 29	November 26	December 31



# ORGANIZATION

OF THE

## School Committee

### 1913

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JOHN H. LAMBERT, M. D., Chairman.  
HUGH J. MOLLOY, Secretary.

---

	Term Expires
PATRICK J. BAGLEY, D. M. D. ....	1913
Res., 23 Lombard St.	
Tel. 2156. Bus., 169 Merrimack St.	
ABEL, R. CAMPBELL, .....	1914
Res., 23 Harris Ave.	
Tel. 2185. Bus., Sun Building.	
JOHN H. LAMBERT, M. D. ....	1914
Bus., 202 Merrimack St.	
Tel. 3564. Res., 70 Wannalancit St.	
JOHN C. FARRINGTON, .....	1913
Bus., 15 Paige St.	
Tel. 3228-1. Res., 182 Perry St.	
PERRY D. THOMPSON, .....	1914
Res. 185 Andover St.	
Tel. 3822. Bus., 31 Donovan Bldg.	

### STANDING COMMITTEES

- Teachers**—Dr. Lambert, Dr. Bagley, Mr. Campbell, Mr. Farrington, Mr. Thompson.
- Books and Supplies**—Mr. Campbell, Dr. Bagley, Mr. Farrington, Dr. Lambert, Mr. Thompson.
- Evening Schools**—Dr. Lambert, Dr. Bagley, Mr. Campbell, Mr. Farrington, Mr. Thompson.
- High School**—Mr. Thompson, Dr. Bagley, Mr. Campbell, Mr. Farrington, Dr. Lambert.
- Rules**—Dr. Bagley, Mr. Campbell, Mr. Farrington, Dr. Lambert, Mr. Thompson.
- Finance**—Mr. Farrington, Dr. Bagley, Mr. Campbell, Dr. Lambert, Mr. Thompson.
- School Houses and Hygiene**—Mr. Campbell, Dr. Bagley, Mr. Farrington, Dr. Lambert, Mr. Thompson.
- Industrial School**—Mr. Thompson, Dr. Bagley, Mr. Campbell, Mr. Farrington, Dr. Lambert.

### ASSIGNMENT OF SCHOOLS

- Dr. Bagley**—High, Industrial, Butler, Green, Worthen street, Morrill, Kirk street, Cabot street, London street, Carter street, Agawam street; Agawam Kindergarten.
- Mr. Campbell**—High, Industrial, Highland, Lincoln, Washington, Grand street, Howard street, Dover street, Franklin, Pine street, Lincoln Primary, Middlesex Village, Powell street, Washington Primary, Laura Lee; Dover, Franklin, Pine street, and Laura Lee Kindergartens.
- Mr. Farrington**—High, Industrial, Varnum, Colburn Grammar, Colburn Primary, Charles street, Ames street, Central street, Eliot, Cottage street, Lyon street; Charles street, and Varnum Kindergartens.
- Dr. Lambert**—High, Industrial, Bartlett Grammar, Pawtucket, Greenhalge Grammar, Cross street, New Moody street, Lexington avenue, Greenhalge Primary, Bartlett Primary, Lakeview avenue, Billings street, Bartlett and Pawtucket Kindergartens.
- Mr. Thompson**—High, Industrial, Moody, Edson, Riverside Grammar, High street, Pond street, Sycamore street, Weed street, Riverside Primary, West Sixth street, Tenth street; Moody and Chapel street Kindergartens.

# ASSIGNMENT OF EVENING SCHOOLS

Dr. Lambert—High, Green, Greenhalge.  
 Mr. Farrington—Colburn, Edson, Franklin.  
 Mr. Campbell—Butler, Worthen, Mann.  
 Dr. Bagley—Howard St., Middlesex Village, Cabot St.  
 Mr. Thompson—Drawing, Old Moody, Riverside.

HUGH J. MOLLOY, Superintendent of Public Schools.  
 Office in City Hall.

Office Hours—One hour after the forenoon session of the schools; at other times, including Saturdays, by appointment. Telephone 2728. Home Telephone 3121.

Supervisor of Primary Grades.

ALICE T. LEE.

12 South Walker St. Telephone 1405.

Office Hours—12 to 1 every school day.

Clerk

FANNIE A. THOMPSON.

Telephone 1066.

School Supply Agent

HENRY L. WILLIAMS.

Office in School Supply Room, City Hall.

Hours—8 a. m. to 12:30 p. m., and 1 to 5 p. m.

Office Telephone 2727. Home Telephone 2714.

Supervisor of Janitors.

WILLIAM F. THORNTON.

Office, City Hall, Third Floor.

Office Hours—12m. to 1 p. m. Home Telephone 3423.

## TRUANT COMMISSIONERS

WM. F. THORNTON,

CAMILLE ROUSSIN, HENRY L. WILLIAMS,

JOHN J. WALKER.

Office in City Hall, Third Floor.

Office Hours—12 m. to 1 p. m. for all the working days of the year.

## REGULAR MEETINGS OF THE SCHOOL COMMITTEE

January 28	February 25	March 25	April 29
May 27	June 24	July 29	August 26
September 30	October 28	November 25	December 30





# REPORT OF THE

## Superintendent of Schools

Office of the Superintendent of Schools,  
March 25, 1913.

To the School Committee of Lowell:

The following report, for the year 1912, is respectfully submitted.

### SUMMARY OF STATISTICS

Valuation of City (basis of taxation in 1911) ..	\$84,694,648.90
Valuation of school houses and lots .....	1,959,750.00
Rate of taxation (\$19.00 per \$1000) .....	1.90 per cent.
Expenditures for day schools .....	377,109.47
Expenditures for evening schools .....	17,448.75
Day school expenditures to total valuation ..	.445 per cent.
Day and evening school expenditures to total valuation .....	.466 per cent
Population by census of 1910 .....	106,294
Number of polls .....	24,652
Decrease for the year .....	1,151
Number of children between five and fifteen years of age, September 1, 1912, males 7218; females 7532 .....	14,750

<b>Ward One,</b>	<b>1018</b>	<b>Ward Six,</b>	<b>3188</b>
“ <b>Two,</b>	<b>1511</b>	“ <b>Seven,</b>	<b>1595</b>
“ <b>Three,</b>	<b>1547</b>	“ <b>Eight,</b>	<b>1323</b>
“ <b>Four,</b>	<b>1475</b>	“ <b>Nine,</b>	<b>1678</b>
„ <b>Five,</b>	<b>1415</b>		

Decrease in the year .....	43
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Number between 7 and 14 (compulsory school age) .....	10,874
Increase for year .....	81
Number of public day schools .....	62
One High, thirteen Grammar, thirty-five Primary, two Mixed, eleven Kindergarten.	
Number of public school buildings .....	59
Occupied by day schools, 53; used for evening schools, 3; unoccupied, 3.	
Number of school rooms in actual use .....	306
High, 37; Grammar, 129; Primary, 124; Mixed, 4; Kindergarten, 12.	
Elected teachers Dec. 31, 352; on leave, 13; in service .....	339
Teachers in service Dec. 31, including clerk in H. S. ....	363
Elected, 339; permanent substitutes, 24.	
Subdivisions of Elected Teachers in service:	
High, 43, 14 men, 29 women; Grammar, 142, 12 men, 130 women; Primary, 116 women; Mixed, 4 women; Kindergarten, 22 women; Drawing, 2 women; Music, 1 man, 1 woman, Sewing, 2 women; School visitor, 1 woman; Supervisor of primary grades, 1 woman.	
Teachers in Evening Schools, term of 1911-12 ..	132
High, 28; Elementary, 86; Drawing, 18.	
Pupils enrolled in Evening Schools, term of 1911-12	3546
High, 966; Elementary, 2256; Drawing, 324.	
Whole number of pupils enrolled in Day Schools	12,721
High, 1273; Grammar, 5659; Primary 4984; Mixed, 158; Kindergarten, 647.	
Average number belonging to Day Schools....	10,816
High, 1173; Grammar, 4986; Primary, 4128; Mixed, 138; Kindergartens, 391.	

Average attendance .....	9,991
High, 1120; Grammar, 4677; Primary, 3764; Mixed, 129; Kindergartens, 301.	
Average number belonging to each teacher ..	34
High, 32; Grammar, 35; Primary, 36; Mixed, 35; Kindergarten, 18.	
Average belonging to each room .....	36
High, 32; Grammar, 35; Primary, 36; Mixed, 35; Kindergarten, 33.	
Average per cent. of attendance .....	92.37
High, 95.48; Grammar, 93.82; Primary, 91.18; Mixed, 93.47; Kindergarten, 76.98.	
Average cost of each pupil, for tuition only, based on the average number belonging ..	\$24.13
High, \$35.68; Grammar, \$22.99; Primary, and Mixed, \$19.85; Kindergarten, \$30.96.	
Total cost per pupil for tuition, salaries of janitors, medical inspection, six-sevenths of supervision, supplies, fuel, and all inci- dentals, based on enrollment .....	\$29.60
Same based on average number belonging ....	\$34.82
Average cost per pupil in evening schools for teachers and janitors, fuel, light, supplies and one-seventh of supervision, based on average number belonging .....	\$10.06

### INDUSTRIAL SCHOOLS

(Not included in the foregoing, Sept. to Dec. only)

Boys: Buildings, 2; rooms, 10; teachers, 9; pupils enrolled, 158; average belonging, 144; average attending, 132; per cent. attendance, 91.

Girls: Building, 1; rooms, 4; teachers, 6; pupils enrolled, 97; average belonging, 82; average attending, 74; per cent. attendance, 90.

## RECEIPTS AND EXPENDITURES

## Receipts

Appropriated and assessed in 1912 ..... \$420,983.57

## Expenditures

Paid to teachers of day schools:

High School ..... \$41,858.87

Grammar Schools—Bartlett School \$10,480.94

Butler School 13,088.29

Colburn School 6,844.37

Edson School 9,168.89

Green School 9,829.26

Greenhalge School 7,778.92

Highland School 11,703.60

A. Lincoln School 9,448.67

Moody School 9,539.07

Pawtucket School 6,328.15

Riverside School 2,952.49

Varnum School 12,047.27

Washington School 5323.75

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114,529.67

Primary and Mixed Schools..... 84,689.25

Kindergartens ..... 12,106.53

Special teachers..... 4,963.82

Permanent Substitutes..... 2,874.01

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Total paid for instruction in day schools....261,022.15

School physicians and school visitor:—

Paid school physicians.....\$ 1,800.00

Paid school visitor..... 638.89

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2,438.89

## Janitors:—

Paid janitors of day schools.....51,397.61

## Evening Schools:—

Teachers, High and Elementary Schools 13,007.25

Teachers, Drawing and Art Schools 2,069.00

Janitors ..... 2,470.50

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\$17,546.75

## Cost of supervision:—

Superintendent of Schools.....\$3,075.00

Office Assistant..... 687.50

Truant officers (four)..... 4,704.41

Assistant in supply room..... 864.50

Extra Assistant in Supply room..... 25.00

Assistant Supervisor of janitors..... 437.50

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\$9,793.91

Industrial School teachers and janitors.....16,195.18

Total Salaries, Industrial Schools omitted.....\$342,199.31

Total Salaries, Industrial Schools included ..... 358,394.49

**Bills**

Coal (evening schools \$573.90) ..... \$18,812.11

Wood (evening schools \$4.75)..... 652.50

Water (evening schools \$38.64)..... 872.37

Gas (evening schools \$898.80)..... 1,367.22

Electric lighting (evening schools \$848.74) 1,024.41

Electricity for power..... 2,684.62

Repairs by Supt. Public Buildings..... 698.16

General repairs ..... 901.94

Electrical repairs ..... 975.26

Text books (evening schools \$393.18).... 6,908.65

Writing books, stationery, etc., (eve. schools

\$172.48) ..... 4,963.00

Supplies for janitors.....	2,002.01
Material for sewing.....	251.49
Supplies for kindergartens.....	311.50
Supplies and apparatus, H. S. laboratories	103.57
Manual training supplies.....	198.12
Bills of Middlesex County, board of truants	3,873.54
Printing, (eve. sch. \$129.14).....	1,565.94
Annual Report, printing 100 pages.....	366.05
Board of horses, carriage repairs, etc....	679.65
New wagon.....	143.00
High School Regiment.....	444.85
Graduations (evening schools \$101.10)....	658.97
Medical Inspection supplies.....	22.00
Telephones .....	81.66
Manual training in grammar schools.....	56.26
Dental equipment.....	735.10
Examinations of candidates for teaching posi- tions .....	100.00
Industrial Schools.....	10,230.17
Miscellaneous .....	904.96
Total of bills, Industrial Schools omitted .....	\$52,358.91
Total of bills, Industrial Schools included.....	62,589.08
Salaries and bill's, Industrial Schools omitted..	394,558.22
Salaries and bills, Industrial Schools included ....	420,983.57

#### Analysis of Industrial School Expenses

Salaries of day school teachers.....	12,042.97
Janitors of day schools.....	1,761.96
	<hr/>
	13,804.93
Salaries of evening school teachers .....	1,790.00
Janitors of evening schools .....	600.25
Total of salaries.....	16,195.18
Equipment and supplies .....	10,230.17
Expected reimbursement by State to cover period from Sept. 1911 to Dec. 1, 1912,	11,275.26

#### School House Repairs

Expenditures by Lands and Buildings Department \$19,500.00



## SCHOOL CENSUS

The number of children between five and fifteen years of age in September, 1912, was 14,750, — 223 less than in September, 1911.

The number enrolled in the public schools was 12,885, and the presumption is that practically all of the others were enrolled in private or parochial schools.

The census of children of school age from which these figures have been taken is required by statute; it is taken by the truant officers, with some help from the janitors, and appears to be the only means of reaching even an approximate estimate of the number, names, and residences of the children of school age.

## RECEIPTS AND EXPENDITURES

A comparison of the total expenditure for 1912 with that for 1911 shows an increase of about \$19,000. Without going into minute details, attention may be called to an increase of \$12,000 on account of the industrial school, of \$4000 on account of the increase in the pay of janitors, of \$2000 in the fuel account, and of \$1000 for light and power; there are slight increases and decreases here and there but the great difference in the totals for the two years can be attributed to the amounts above enumerated.

The total amount received for the tuition of outside pupils and paid into the general treasury was \$13,442.71; the amount to be received from the State as its share of the maintenance of the industrial school for the year 1912 is about \$9000. If these amounts be deducted from the total charged up to the school department it will be seen that that total is considerably less than \$400,000.

The following table shows the amount per pupil in each school for text books and supplies.

	Cost 1912	Pupils 1912	Average 1912	Average 9 years
High School	\$4,620 91	1173	\$3 94	\$3 96
<b>GRAMMAR SCHOOLS</b>				
Bartlett	\$400 28	417	\$ 95	\$1 45
Butler	789 53	641	1 23	1 38
Colburn	177 64	295	60	1 32
Edson	427 57	451	94	1 08
Green	640 78	419	1 52	1 29
Greenhalge	398 18	325	1 22	1 93
Highland	612 96	495	1 23	1 27
Lincoln	392 58	462	85	1 31
Moody	284 56	381	74	1 02
Pawtucket	688 58	250	2 75	1 39
Riverside	114 87	93	1 23	1 03
Varnum	651 53	557	1 17	1 10
Washington	258 48	200	1 29	
Totals	\$5,837 54	4986	\$1 17	\$1 29
<b>PRIMARY SCHOOLS</b>				
Agawam	\$ 32 48	89	\$ 36	\$ 39
Ames	37 45	136	27	36
Bartlett	41 00	209	19	
Billings	111 78	142	78	47
Cabot	15 71	83	19	42
Central	59 09	136	43	42
Charles	69 20	154	45	47
Cottage	40 23	103	39	38
Carter	46 96	168	28	37
Cross	48 36	66	73	62
Dover	41 10	121	34	43
Eliot	29 83	131	22	42
Franklin	57 00	133	42	45
Greenhalge	10 69	105	10	37
Howard	105 54	136	77	71
Kirk	32 38	64	50	37
Lakeview	90 08	143	63	56
Lexington	29 47	26	1 13	92
London	31 60	125	25	46
Lyon	89 23	190	47	96
Lincoln	40 15	84	47	41
Morrill	22 05	97	22	82
Middlesex	51 27	112	45	73
Moody Street	55 22	173	32	49
Oaklands	27 58	77	35	36
Pine	63 75	120	53	49
Pond	39 59	164	24	24
Powell	47 21	96	49	41
Laura Lee	113 55	227	50	41
Riverside	25 00	87	28	21
Tenth	36 70	140	26	25
Colburn	26 53	142	18	31
Weed	49 80	83	60	27
West Sixth	48 58	147	33	42
Worthen	19 07	98	19	36
Totals	\$1,685 23	4307	\$ 39	\$ 45
Kindergartens	352 46	391	90	1 00
Totals for all schools	\$12,496 14	10,857	\$1 15	\$1 15

## SCHOOL HOUSES

When we come to the general consideration of the school houses in the City of Lowell we find a rather interesting, not to say peculiar, state of affairs. According to the facts set forth in the summary on page twelve of this report, fifty-three buildings are occupied by day schools, and the number of school rooms in actual use is three hundred six; these figures show an average of less than six rooms per building.

If we take the buildings used for the high school and, in addition to them, seven other large school buildings, a total of nine school buildings in all, we shall have remaining forty-four buildings, with 171 rooms; here, then, we have forty-four school buildings which show an average of less than four rooms.

On the score of economy alone, taking into consideration the care and heating of the buildings and fixed or overhead charges generally, this plan of housing children, which has grown up during a long term of years and without a far-seeing or comprehensive scheme, is wasteful.

On the score of efficiency and the administration of the school department in such a way as to get the best possible results from the money expended, such scattering of children at so many points throughout the city has practically nothing to recommend it.

If we had fewer and better and larger buildings, buildings, let us say, which would in almost every case accommodate five or six hundred pupils, supervision could be more regular and thorough, the grading of pupils could be adapted better to their needs, the problem of the backward child and the progressive one also could be treated better, and special classes, which we need greatly today, could be arranged and carried on.

Lowell is, all things considered, a very compact city and the distances within the different sections and even from one section to another are comparatively short; and there is no apparent need of so many small school buildings even if it were economical to continue to use them; much less, then, should

such a state of affairs be allowed to continue, since economy, efficiency and progressive school administration all argue against it.

Careful, comprehensive study of the school population, present school districts, and the conditions which are likely to prevail during the next ten or twenty years would lead to the adoption of a large and coherent plan for the proper housing of the school children of Lowell; and such a plan would be in reality a saving and economical one for the city, particularly when we consider to what an extent a large amount of discarded property would contribute toward the cost of new buildings, while the decreased cost of maintenance and tuition, on account of better and more compact grouping and classification, would go a long way toward meeting the expense of making the change.

It is safe to say that there is no question of municipal administration today which is more important; the question should be taken up and investigated thoroughly, because the development and the progressive administration of the school system depend upon it to a very high degree.

### SCHOOLS AND TEACHERS

Only three changes have been made in school rooms during the year. One primary room at the Morrill School was taken to meet the needs of the Industrial School; a primary room was opened at the Washington School; the kindergarten at the Lincoln School was discontinued and the room was given over to the grammar grades.

The following data concern changes in the roll of teachers:

#### RESIGNED

##### Term of Service

Lizzie S. Lowe.....	55 years
Anna W. Devereaux.....	19 years
Blanche A. Cheney.....	16 years
M. Josephine Donehue.....	12 years

Annie T. Delay.....	12 years
Etta Foye.....	11 years
Joanna V. Hoar.....	11 years
Edith Kelley.....	4 years
Mary E. Cassidy.....	4 years
M. Alice Mather.....	2 years
Edward J. Clark, M. D.....	2½ years
Arthur W. Trubey.....	1 year
Harland Miller.....	7 months

## TRANSFERED

Mary C. Timmons, from the Edson to the Ames street.  
 Alice O. Stickney, from the Billings street to the Edson.  
 Flora A. Owen, from the High to the Moody.  
 Mary T. Whelley, from the Morrill to Cabot street.  
 Ida J. Clarke, from the Cabot street to the Greenhalge Primary.  
 Susan F. Burbank, from the High to the Edson.  
 Myrtle M. Killpartrick, from the Lincoln to Washington  
 Primary.  
 Esther M. Downing, from the Lincoln to the Industrial.  
 Olive J. Palm, from the Washington to the Pawtucket.  
 Elizabeth G. Common, from the Pawtucket to the Washington.  
 Etta M. Smith, from the Riverside to the Billings street.  
 Ruth Crowell, from the Billings street to Riverside Primary.  
 Kate F. Murphy, from Ames street to Lyon street.  
 Etta M. Smith, from the Billings street to the Riverside.  
 Ruth Crowell, from the Riverside to the Billings street.

## ELECTED

Mary C. Joyce, to the High School.  
 Margaret A. Teague, to the High School.  
 John H. Burns, to the High School  
 William M. Collins, M. D. Medical Director in the High  
 School.  
 Thomas Doyle, Military Instructor in the High School.  
 Frances L. Masterson, to the High School.  
 Margaret M. Cassidy, to the High School.

Joseph G. Pyne, to the High School.  
 Alice T. Lee, Supervisor of Primary Grades.  
 Esther M. Owens, Assistant Teacher in Sewing.  
 Patrick J. Reynolds, Principal of Riverside School.  
 Timothy H. Reardon, to the Industrial School.  
 Charles J. Rodgers, to the Industrial School.  
 Joseph O'Donoghue, to the Industrial School.  
 Esther G. Donlan, to the Industrial School.  
 Delia F. Briscoe. Carrie L. Brown.  
 Emma M. Graham. Vera E. Groves.  
 Gertrude B. McQuade. Annie L. McKissock.  
 Mary A. McCue. Martha R. Taylor.

An examination of candidates for teachers' certificates of the third grade was held on June 29, 1912. Fifty candidates presented themselves for the examination and as a result of this examination twenty-seven candidates were placed upon the list of permanent substitutes. Two of this number did not avail themselves of the privilege of going on the eligible list and a third candidate, after serving for a brief time as a substitute, obtained a leave of absence for the purpose of further study.

These permanent substitutes have been in constant employment since the opening of the schools in September as substitutes for regular teachers, as assistant teachers in rooms where the numbers were unusually large, or as teachers of groups or small classes of backward children.

### Pupils by Grades

	Males	Females	Total	Per Cent.		Males	Females	Total	Per Cent.
Kind'tens	179	175	354		Grade	7, 317	341	658	*18
Grade 1,	770	754	1524	*11	"	8, 237	266	503	*9
" 2,	654	576	1230	*14	"	9, 211	236	447	*17
" 3,	546	520	1066	*13	"	10, 196	196	392	
" 4,	555	523	1078	*15	"	11, 159	177	336	*9
" 5,	466	428	894	*15	"	12, 120	163	283	†12
" 6,	397	395	792	*11	"	13, 92	120	212	†13

\*Decrease

†Increase



## HIGH SCHOOL

The high school graduated a class of 223 in June and there was an entering class of 426 in September. Of this class 316 were from grammar schools, 64 from parochial schools, 39 from adjoining towns which possess certificate privilege, and 7 were admitted by examination.

The grammar schools promoted 419 pupils to the high school, of whom 316 or 75 per cent. entered the high school in September. The average age of the entering class was 14 years 8 months.

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The graduation exercises were held in Keith's Theatre on June 26. The program of the occasion, with the names of the graduates, the names of the Carney medal scholars, and the names of the students who were awarded honorable mention, follows.

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- |   |   |                 |
|---|---|-----------------|
| 1 | OVERTURE Morning, Noon, and Night   | Suppe           |
|   | Sheehan's Pawtucket Orchestra   |                 |
| 2 | CHORUS Hail to the Chief  | Prout           |
|   | Boat Song from "The Lady of the Lake"   |                 |
| 3 | SALUTATORY An Ideal Woman   |                 |
|   | Teresa Garland Lew  |                 |
| 4 | BOYS' GLEE CLUB   |                 |
|   | (a) Yachting Glee   | Culbertson      |
|   | (b) The Bells of Shandon  | George B. Nevin |
|   | First Tenors: Messrs. Hillier, '12; Knapp, '12; Gardner, '12; Kerwin, '12; O'Brien, '12     |                 |
|   | Second Tenors: Messrs. Gillinson, '13; Hartford, '12; Grover, '12; Wells, '12; Johnson, '12 |                 |
|   | First Bass: Messrs. Leland, '12; Keyes, '12; Hazeltine, '12; Silk, '12; Safford, '12.       |                 |
|   | Second Bass: Messrs. Leggat, '12; Wilson, '13; Duval, '13; Enwright, '12; Clark, '12.       |                 |

- 5 CONCERT WALTZ Blue Danube Strauss  
Sheehan's Pawtucket Orchestra

6 ADDRESS

Very Reverend Thomas I. Gasson, S. J.,  
President of Boston College  
Introduction by Dr. James B. O'Connor

7 GIRLS' GLEE CLUB

- (a) Chorus of Angels, from "Eli" Sir Michael Costa  
(b) Lift Thine Eyes, from "Elijah" Mendelssohn  
First Sopranos: Misses Lagasse, '12; Hickey, '12; Shea,  
'12; Donahoe, '12  
Second Sopranos: Misses Richardson, '13; Badger, '12;  
Weinbeck, '12  
First Altos: Misses McDermott, '12; Conley, '12;  
Green, '12.  
Second Altos: Misses Thompson, '12; Egan, '12;  
Lew, '12.

8 PRESENTATION OF CLASS GIFT

Loring Russell Kew

ACCEPTANCE,

Mr. John C. Farrington,  
President of School Board

9 PRESENTATION OF LOWELL HISTORICAL SOCIETY PRIZES

For Best Historical Essays on the following subject:  
"Lowell in the Civil War"

First Prize: \$10 in gold: Gladys Storm

Second Prize: \$5 in gold: Stanley Worth

Presented by Dr. Moses Greeley Parker

- 10 CHORUS, Soldiers' Chorus, from "Faust" Gounod

11 PRESENTATION OF CARNEY MEDALS

Honorable mention of those who have attained a  
scholarship rank of 90 per cent  
Mr. Arthur K. Whitcomb, Superintendent of Schools

- 12 SOLO The Sword of Ferrara Builard  
Horatius Bonar Leggat

- 13 GIRLS' GLEE CLUB  
(a) The Woodpecker  
(b) The Last Rose of Summer

- 14 VALEDICTORY The Greater the Service, the Greater  
the Man  
William Warren Noonan

- 15 BOYS' GLEE CLUB  
(a) Mrs. Cosy's Boarding House J. C. Macy  
(b) The Wise Old Owl

- 16 PRESENTATION OF DIPLOMAS  
His Honor, the Mayor, James E. O'Donnell

- 17 CLASS ODE Air "Auld Lang Syne"  
Words by Bertha Elzade Chapman  
The time has come when we must go  
From the school we hold so dear;  
Both pain and happiness we know,  
Now the parting day is here.

For well we know that days to come,  
Whate'er of joys they bring,  
Will ne'er be like those that have gone  
On light and happy wing.

Our lives have been surrounded here  
With watchful, loving care;  
With kind and faithful teachers near,  
Our burdens few to share.

Such friendships, too, as now abound,  
The love of class-mates dear,  
In after life will not be found,  
To help us loads to bear.

No wonder, then, our hearts are sad  
To leave these friends so dear,  
Whose loving hearts and friendly ways  
Have made us happy here.

But happiness on sadness dawns,  
On this great day of ours,  
For, though the roses have their thorns,  
The thorns, in turn, have flowers.

We always have been taught to feel  
That, if the race we'd run  
And finish with an earnest zeal,  
The reward was sure to come.

So, now that this small vict'ry's won,  
If we have done our best,  
We'll face our lives with courage strong  
And leave with God the rest.

18 FINALE Holy Cross Commandery  
Sheehan's Pawtucket Orchestra  
Emil J. Borjes, Director

Bagley

## GRADUATES

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### Five Years' Course

Bush, Gertrude Ellen	Emerson, Mildred
Davis, Myrtle Adela	Estes, Dorothy
Field, Winthrop Brooks	Dodge, Harold French
Gardner, Kenneth Alexander	Jones, Charles Everett

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### Four Years' Course

Bennett, Rose Edith Frances	Dillon, Mary Louise
Boyle, Martina Lucille	Donohoe, Marghretta Agnes
Braley, Anna Eliza	Draper, Etta May
Brooks, Helen	Durkin, Lilla Veracunda
Bull, Leila Sawyer	Flynn, Nettie Mary
Burrows, Gertrude May	Frawley, Jennie Teresa
Caddell, Mary Elizabeth	Greene, Lillian
Callahan, Ella Rose	Greene, Susie Mae
Caster, Ida Mathilda	Grimard, Helen Marie
Chapman, Bertha Elzade	Gruber, Winifred Helen
Chase, Susan Emma	Harris, Martha Haynes
Choate, Irene Estelle	Harrison, Mary Florence
Conley, Luella May	Hickey, Helen Elizabeth
Concannon, Mary Frances	Humphrey, Dorothy
Cullinan, Rose Frances	Johnston, Jane Thecla
Cummings, Gladys Mary	Kenney, Catherine Veracunda
Daggett, Mildred Maude	Keyes, Annabelle Veronica
Kivlan, Martha Louise	Rowell, Bessie Eva
Lagasse, Bertha Dorothy	Shay, Clara Maybelle
Lew, Teresa Garland	Shea, Mary Beatrice
Libby, Blanche Josephine	Sheehan, Alice Agnes
Lewitzky, Anna Dora	Sherburne, Ada Louise
Lougee, Leona Lois	Simpson, Marion
Lowney, Louise Viola	Spaulding, Nellie Edna
Lynch, Helen Louise	Stewart, Anna Elizabeth

Mack, Alice Helen	Storm, Gladys
Mevis, Gladys Winifred	Streeter, Beryl Vera
Morrison, Fannie Tolmie	Sturtevant, Mildred Anna
Mullaney, Anna Marie	Sullivan, Grace Louise
McCarthy, Helen Grace	Sunbury, Gladys Ruth
McDermott, Teresa	Swann, Marion Alice
McDonald, Hazel Agatha	Thistle, Anna May
McLoon, Alice Angie	Thompson, Margaret Adelia
McMaster, Marion Ella	Thumm, Emma Carolina
McQuesten, Alberta Mead	Trombly, Beatrice Viola
Nelson, Bertha Holbrook	Walker, Flora Henrietta
O'Donnell, Marie Josephine C.	Walsh, Irene
O'Donnell, Katherine Mary	Wehinger, Viola May
O'Neil, Mary Teresa	Weinbeck, Gertrude
Peard, Mary Osman	Weinbeck, Hazel
Phelps, Marion Frances	Wiggin, Emily Nutting
Polk, Edith Prudence	Wiggin, Ethel Harriett
Richards, Esther Josephine W.	Wilson, Natalie
Woodworth, Elizabeth	
Barrett, William Francis	Clark, Dana Edward
Bennett, Horace Ralph	Cressy, Fred
Black, John Edward	Desmond, Cornelius Francis
Brennan, Harry Patrick	Dick, Wong
Caldwell, Harold Nute	Dow, Paul Elliott
Callahan, Frank Wesley	Dows, Harold Winthrop
Dragon, Wilmer Albert	Lareau, Henry Charles
Echmal, John Gregory	Lunan, Karl Sheppard
Edgar, Herbert Holdsworth	Markham, James Edward
Erdis, Robert MacDougall	Markham, John Francis
Fisher, Austin Lowell	Mellen, Earl Rufus
Fletcher, Ralph Andrew	Noonan, William Warren
Greene, Louis Abe	Perlman, Samuel
Grover, Luther Prescott	Phelps, George Arthur
Haggerty, George Francis	Quill, Percival James
Harris, Ira	Redding, William
Harrington, James Place	Richardson, Wilbur Sylvester



Hartford, Christopher Wells	Safford, Laurance Frye
Hillier, Charles Henry	Safford, Wallace Francis
Howarth, Charles Lincoln	Sherburne, Maxwell Gardner
Hunnewell, Myron Theodore	Silk, Percy Bysshe Shelley
Kerrigan, Arthur John	Sokolsky, Henry
Kew, Loring Russell	Stearns, Edmund
Keyes, Paul	Sylvester, Harry Lysle
Kirby, Donald Taylor	Trubey, Clarence Arthur
Knapp, Oliver Linwood	Wells, Roy Frederic
Worth, Stanley	

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### Three Years' Course

Alexander, Grace Marie Jeanne	Gardner, Clara Dorothy
Anderson, Cora Evelyn	Gagne, Blanche May
Badger, Helen Marguerite	Gulline, Florence
Byrne, Lillian Laurie	Hansen, Marguerite Hazel
Clough, Alice	Hunter, Florence Jessie
Cummings, Helen Dorothy	Irvine, Frances Rose
Cryan, Mary Elizabeth	Kelley, Alice Elizabeth
Cusick, May Agnes	King, Mary Ellen Alicia
Delaronde, Beatrice Angelina	Laporte, Aldia Marie
Ducharme, Robea Elizabeth	Lavigueur, Yvonne Katherine
Lyons, Florence Elizabeth	Smith, Ruby Gertrude
McPhadden, Alice Cecilia	Somers, Hyacinth Gertrude
Noonan, Veronica Mary Patricia	Snyder, Carrie Cornelia
Ort, Emmaline Katherine	Staples, Bernice Lillian
Palmer, Viva Althea	Spencer, Helen Florence
Quinn, Theresa Estelle	Taber, Alice Naomi
Read, Lillian	Wentworth, Edna May
Riley, Alice Margaret	Welch, Mary Rose
Riley, Helen Frances	White, Irene Bertha
Rowe, Annie Hulme	Whelan, Mary Evangeline

Brunelle, Lucien Rodrique	Higgins, Francis Charles
Cawley, James Howard	Johnson, Alger Goddard
Cogswell, Russeil James	Kerwin, Arthur Daniel
Costello, Ralph Ellsworth	Leggat, Horatius Bonar
Dean, Eugene Francis	Leighton, Walter French, Jr.
Enwright, Harry Aloysius	Leland, Harold Leander
Egan, Francis Aloysius	McCarthy, Henry James
Everett, Kenneth Charles	McElroy, Robert Grant
Fletcher, Harry Clark	McKinnon, Donald Cuyler
Frost, Charles Waller	Mollahan, Joseph Patrick
Gallagher, James Joseph	O'Neil, Walter Edward
Garneau, Arthur E.	Rostler, Sigmund Eli
Gionet, Arthur Wilfred	Sherman, Alden Wool
Goodell, Josiah Butler	Sherman, Roger
Harvey, Wendell Phillips	Smith, Rothwell Everett
Hazeltine, Guy Edgar	Taber, Thomas Reed
Heller, William Charles	Torpey, Henry Kane William
Willett, Raymond Archibald	

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### Carney Medal Scholars

Teresa Garland Lew	William Warren Noonan
Ada Louise Sherburne	Percival James Quill
Robea Elizabeth Ducharme	Maxwell Gardner Sherburne

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### Honorable Mention for Scholarship

Marion Martin, Class of 1911

Gertrude Ellen Bush	Kenneth Alexander Gardner
Dorothy Estes	Alice Naomi Taber
Harold French Dodge	Margaret Adelia Thompson
Henry Sokolsky	Charles Everett Jones

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### Honorable Mention for Attendance

Florence Gulline	Viva Althea Palmer
Teresa Garland Lew	Irene Walsh
Veronica Mary Patricia Noonan	Karl Lunan

## INDUSTRIAL SCHOOL

There is no question today which is receiving more and sharper attention in the school world than that of industrial education or vocational training. It is the belief today of educators and of thoughtful men and women generally that the schools must perform a great and specific work in training boys and girls for useful and profitable occupations. The State has taken the matter up actively and as a result the industrial school movement is well under way.

The Lowell Industrial School was opened in September, 1911, with a membership of 159—106 boys and 53 girls.

At the beginning of the school year in 1912, 68 boys and 29 girls returned for a second year of advanced work, and 90 boys and 68 girls entered the school as new pupils.

Nine men and six women are employed as teachers at the present time and the various departments are reasonably well equipped for thorough and efficient training. The Old Bartlett school, and portions of the Morrill and Mann schools are employed in the work; but the time has come or is rapidly approaching when it will be necessary to provide a building which will satisfy properly the needs of this new and growing department of school work.

It might be wise to say once more that the State has offered to reimburse Cities for one-half the maintenance expense of vocational schools, "so long as they are approved by the Board of Education as to organization, control, location, equipment, courses of study, qualification of teachers, methods of instruction, conditions of admission, employment of pupils, and expenditures of money."

It is, then, needless to add that although the school committee of the City of Lowell have the direct control and

management of the school, have the right to elect teachers and prescribe courses of study, the school must be so managed as to efficiency and the character of its work as to receive the approval of the State's agents; if the school, by reason of unsatisfactory results or the incapacity of its teachers, should fail to receive this approval the city will lose one-half the expense of maintaining the school.

On account of the newness of the school it might not be amiss to reprint in this report much that was set forth in the circular which was published at the time of the opening of the school.

### **LOWELL INDUSTRIAL SCHOOL FOR BOYS.**

This school will give preliminary training for boys in the following trades: Carpenter, architectural draftsman, cabinet maker, machinist, mechanical draftsman, electrician, engineer, automobile repairer.

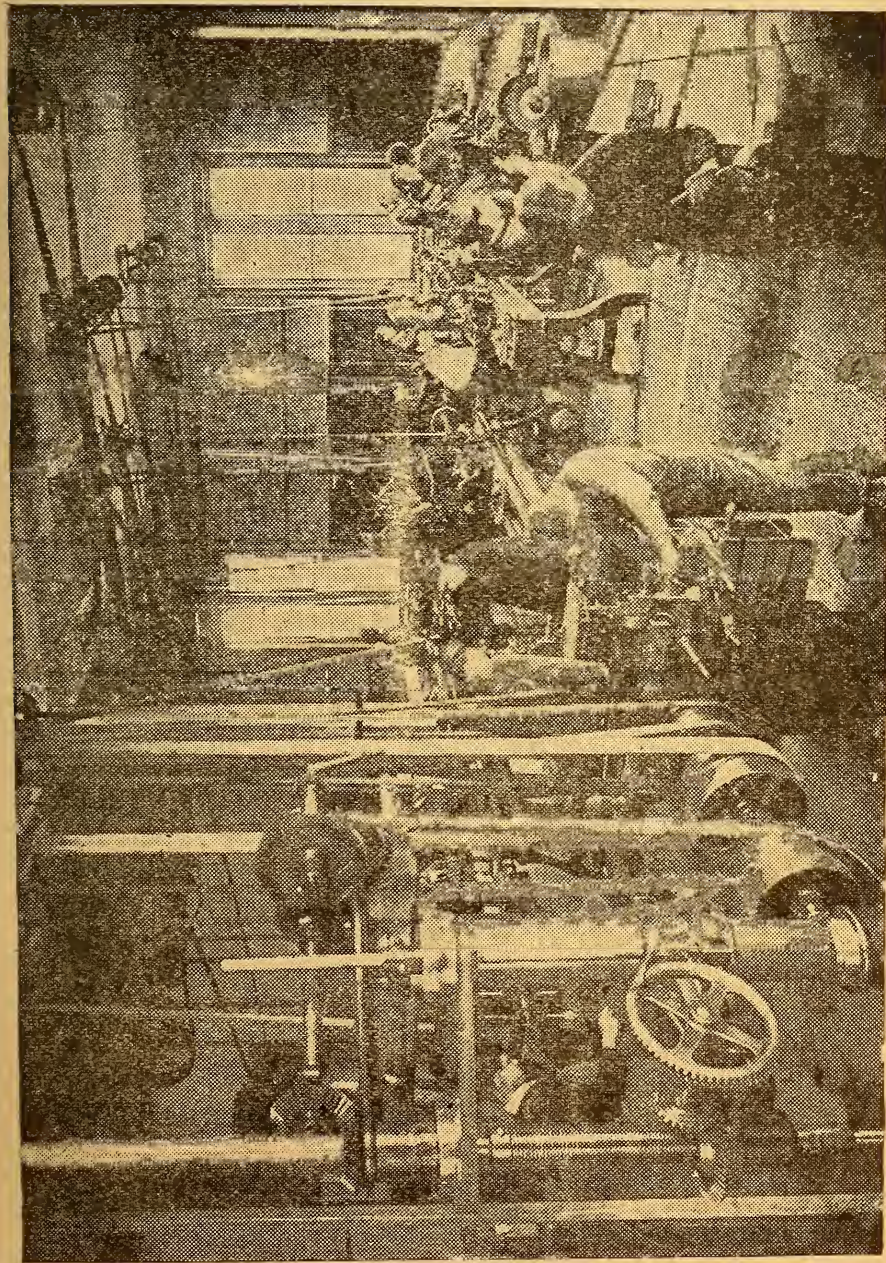
**Carpenter.**—The course providing training for the trade of carpenter will consist of shop practice and science, study of building materials, architectural drawing, mathematics, English and civics.

**Architectural Drawing.**—This course differs from the carpenters' course in having much of the shop work replaced by work in the drafting room, on building construction.

**Cabinet Making.**—This course differs from the carpenters' in having more time devoted to office furniture, etc., than to the building trade work.

**Machinist.**—This course, in addition to English and civics, includes machine shop work, with related mathematics, study of materials, drawing, and some work in steam and electricity. The shop work will consist of practice in the usual operations common to machine shop work.





MACHINE SHOP CLASS

**Mechanical Draftsman.**—The mechanical draftsman course will be similar to the machinists' course with much less shop work and more practice in the drawing room on machine shop work.

**Electrician.**—This course will deal with practical and theoretical electricity, and will include electric wiring, building motors, winding armatures, testing and repairing circuits, and practical experience in the electric power station, etc. In addition there will be special mathematics applied to electrical work, and English and civics will be taught.

**Engineer.**—This course deals with the theory and practice of steam work. It includes in addition English and civics, some machine shop practice, and mathematics.

**Automobile Repairing.**—The automobile repairing course will consist of work similar to that of the machinists' course, with special shop work on the automobile and the study of its operations. Machines are brought to the school, overhauled, repaired and put in running order by the students.

**English.**—The aim of teaching English in this school is to train the boy to speak and write the language with clearness, accuracy and conciseness, especially in relation to the affairs of everyday life. The material used for practice in this work will be taken from the experiences of the pupil in the shops, and in their out-of-school life. A portion of the work will deal with the proper use of technical terms, descriptions of machines, apparatus, etc., and in the later portions of the course pupils will be required to visit various mechanical plants, of which to make a written description, and to report other events which may be of interest. Special effort will be made to cultivate the reading of good books.



**Industrial History, Civics and Citizenship.**—A brief review of the past from the standpoint of the relation of the industrial producer to the general community, together with some detailed study of the development of the mechanical and industrial arts as civilization has progressed.

The civics will deal, in general, with the study of the rights and obligations of a citizen under our form of government.

The courses of study are planned with the following conditions in mind: That while the school will offer a three years' course in the useful arts, it recognizes the fact that many children cannot afford to give much time to education beyond fourteen years of age. Hence the work is planned so that the work of each year is, so far as it goes, complete in itself; that nothing is taught on the theory that it will be of value at some later period in the course, and so that at whatever time the pupil leaves the school he will have had, up to that time, the best preparation which the school can give.

The teachers are all experts in their respective lines. The trades are taught by experienced mechanics, and the atmosphere of the school is more "shoppish" than bookish."

**Equipment.**—The school has an excellent up-to-date equipment in all departments.

No boy will be admitted unless his record shows him to be of good character and that he sincerely desires a practical education. It is expected that when a boy enters the Industrial school he enters with a firm purpose to devote his best efforts to his work, and no boy will be tolerated who does not show inclination to do what is right.

### LOWELL INDUSTRIAL SCHOOL FOR GIRLS.

This school is organized for the training of girls for life activities and duties; to give them a training in the branches of knowledge and the trades that are most useful in gaining a livelihood. To meet these requirements, the Industrial school offers courses in housekeeping, dressmaking and power machine work.

**Housekeeping Course.**—The housekeeping course includes everything that makes and keeps a house in good condition to live in, and to get a hundred cents' worth out of every dollar spent for food and clothes. It will include English, history, civics, home arithmetic, cooking, hygiene, dressmaking, laundry work and care of furniture.

**Dressmaking Course.**—This course is planned to fit a girl for the dressmaking trade and is similar to the Housekeeping Course, only that more time is devoted to dressmaking and it is more of a commercial character. In addition, design and color, salesmanship and textiles will be taught, preparing the girl for the sales' department of a dry goods store.

**Power Work Course.**—This is similar to the Dressmaking Course, only that considerable time is devoted to practice on a power machine.

**Arithmetic in relation to:** I. Dressmaking—Millinery. II. Personal expenditure. III. Household. IV. Business.

**English.**—1. Correction and improvement of everyday speech. II. Personal and business correspondence. III. Cultivation of a taste for reading. IV. Use of typewriter.

**Civics and History.**—Study of local history and government. Study of history applied to the needs of the pupils.

**Textiles.**—Study of Fabrics: I. Name. II. Cost. III. Durability. IV. Uses.

**Design.**—Art as applied to a woman's clothing: I. Color. II. Line. III. Fabric. IV. Appropriateness.

**Home Furnishing.**—Selection of furniture in relation to: I. Beauty. II. Economy. III. Suitability.

**Cooking.**—Economy and management of the kitchen. I. Plain cooking. II. Food values. III. Simple menus. IV. Serving.

Conditions of admission to either of these schools are simply residence in Massachusetts and an age of fourteen or more years. For pupils not living in Lowell a tuition charge of \$100 is made against the town in which the pupil resides, but the schools are absolutely free of expense to the student in any case. Of the amount charged to towns one-half is paid by the State.

All the courses of the boys' school are planned for three years, two sessions a day, five days a week. The girls' courses are two years in length, sessions from 8.30 a. m. to 2.30 p. m. three days a week, and from 8.30 a. m. to 1.30 p. m., two days a week. These two afternoons are shortened so that the girls may use at home the things which they have acquired and may receive visits from their teachers.

Following is a list of some of the more important machines, tools and other items of equipment of the day schools to date:

**Machine Shop Department.**—Eleven engine lathes, four speed lathes, one small planer, one large planer, two small shapers, one plain milling machine, one universal milling machine, one large upright drill press, two medium upright drill presses, one multiple drill press, two power hacksaws, one belt lacing machine, set of large scales, one wet grinder, one

emery wheel stand, twenty-three vises, seven forges, six anvils, one annealing gas furnace, one gas drop forge, and one blower. Miscellaneous machine tools for a class of thirty-five.

**Drawing Room Equipment.**—Equipment for class of seventy-two, including tables, paper, instruments and equipment for blue-printing.

**Wood Working Department.**—One small planer, one combination saw table, one band saw, five pattern maker's lathes, one grindstone, full equipment of saws, vises, and tools for forty boys.

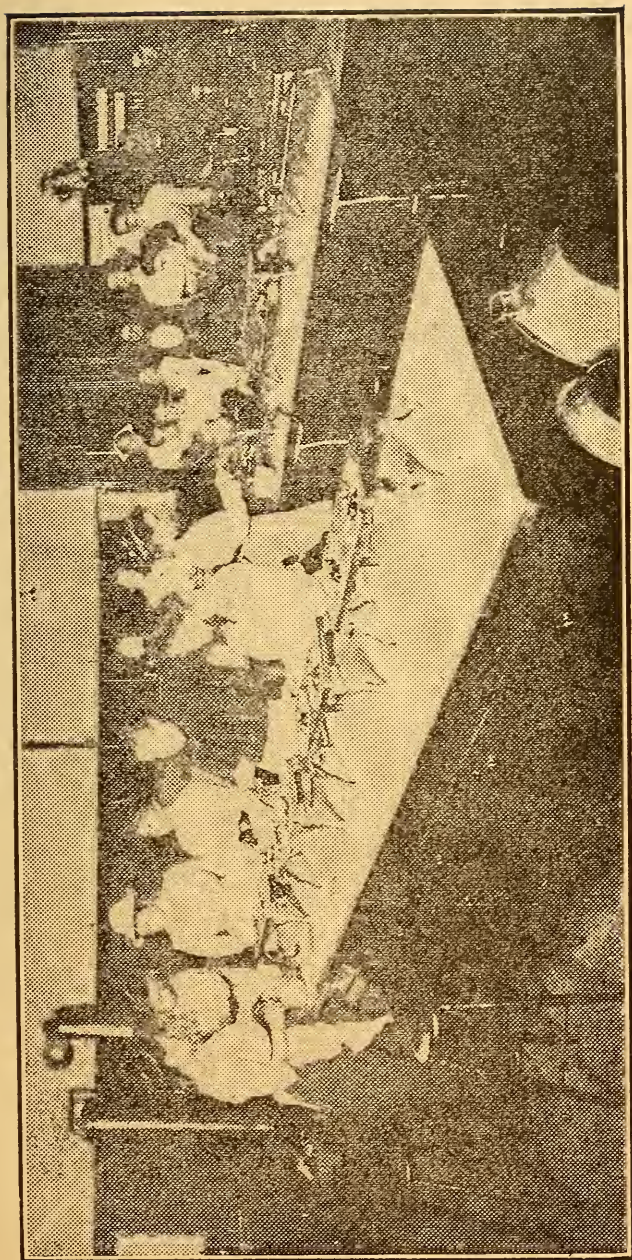
**Electrical Department.**—A motor, generator set, plumbing outfit for soldering, and other power attachments.

**Automobile and Steam Department.**—An automobile for demonstration and repair work, magneto, and all the parts that make up an automobile. Horizontal boiler, vertical boiler, pumps of all kinds, and boiler parts.

**Housekeeping.**—A large coal range with gas stove attachments, one coal range, gas stove, large ice chest, soapstone sink, tables, and kitchen supplies for fifty girls.

**Dressmaking Department.**—Cutting tables, fitting room with mirrors, forms of different kinds, foot-power and high-speed machines. Individual equipment for twenty girls, including scissors.





COOKING CLASS—EVENING SCHOOL

## VOCATIONAL EVENING SCHOOLS

Early in October evening classes were organized in all the courses of the day schools. To secure State approval vocational evening schools must restrict their privileges to those persons who are more than seventeen years of age and who are employed during the day at work to which their evening instruction will relate. In other words, such schools are for the purpose of rendering industrial workers more efficient in trades in which they are already employed and they are not at all intended to teach trades to the unemployed or the unskilled.

Of boys, those who could be accepted numbered 160, and of girls there were 800. The latter were divided into five divisions, and each was given one lesson a week. The boys, being less numerous, were given two lessons a week. The day teachers serve two evenings a week, and their teaching has been supplemented by the employment of eleven more men and fifteen more women for evening teaching, making a total of 20 men and 21 women. Great interest has been shown by all the classes, and the attendance has been excellent.

In addition to the foregoing one evening class has been formed which has no counterpart in the day schools. In response to a petition of the master plumbers of the city a course in plumbing was opened for their apprentices. An average class of fifteen has been maintained during the year.

## TEXTILE EVENING SCHOOL

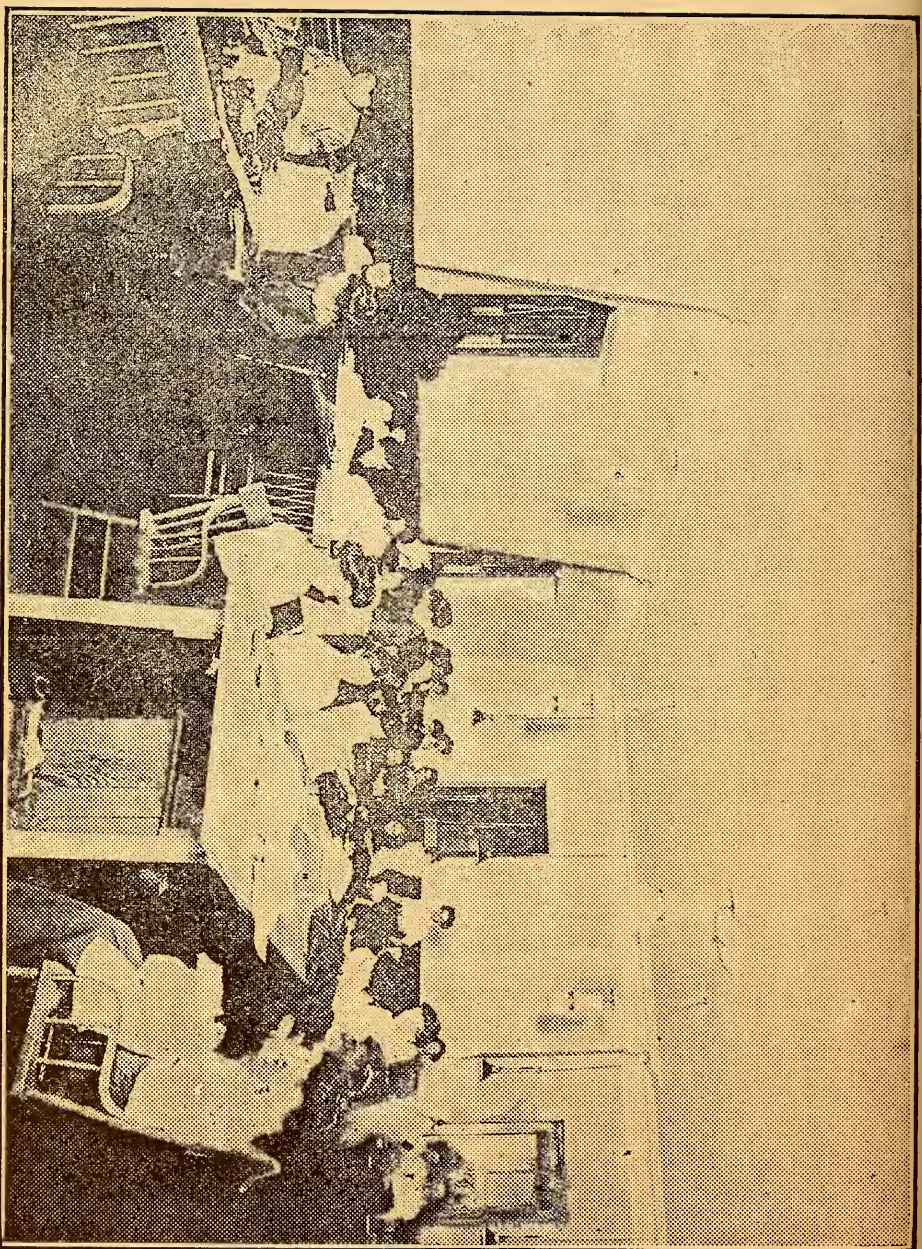
The city of Lowell is fortunate in having a Textile School so good as to have no equal in this, or any other, country. On this account there seemed to be no occasion to offer industrial courses, either day or evening, in textile branches, and none



were planned when the schools opened in September. Later however, there came a very insistent demand from mill men for evening courses in textiles. It was held that the textile industry is the largest in Lowell, and that if schools are to be opened to add to the efficiency of any workers, then those in textiles should receive first rather than second consideration. The teaching asked for in a new school was of a kind too elementary to be undertaken by the chartered school, so that there would be no competition or division of interest between the two. As an earnest of their desire to co-operate, the mills offered to furnish and install all needed machinery if the city would provide a house for it and teachers for evening classes. The offer was accepted, the old Moody school building was opened; the mill men kept their word royally as to equipment; five teachers were engaged by the school committee, and evening classes were opened Dec. 4 as follows: Cotton Spinning; Elementary Weaving and Loomfixing for French operatives; Picker and Card Room Practice; Weaving and Loomfixing for Greeks; Weaving and Loomfixing for Portuguese; Mill Arithmetic. Attendance in each class has been as large as can well be taught by one man, 25 to 45, and the work seems to meet a real need. The equipment is excellent, its value amounting to about \$20,000.

Following is a list of some of the more important machines already in place:

One Kitson combination breaker and finisher picker, one set grinding rolls, one Lowell 40in. (1911) Cotton card, one Lowell Railway head, one Saco and Pettie Railway head, one Woonsocket Machine Shop Drawing frame, one Whiting comber—including comber, sliver lap and ribbon lap machines, one Woonsocket Machine Shop Slubber frame, one Woon-



DRESSMAKING CLASS- EVENING SCHOOL



socket Machine Shop Intermediate frame, one Woonsocket Machine Shop roving frame, one Fales & Jencks Spinning frame, one Fales & Jencks Twisting machine, wet and dry, one Spinning mule, one Easton and Burnham Spooler, one Saco & Pettee reel, one Universal Winding Machine Winder for cones, tubes winding, one Entwistle warper, one Mason plain loom, one Lowell plain loom, one Crompton-Knowles Up-to-date Magazine loom, two Crompton-Knowles Gingham looms, three motors, pulleys, shafting, etc. Miscellaneous machines, such as one Barlow knotter, one yarn reel one twist counter, etc.

### MEDICAL SUPERVISION

Medical supervision of the schools was made compulsory by the State by the Acts of 1906, Chapter 502, and in March 1909, nine physicians were elected by the school committee as school physicians, to each of whom a district was assigned. The inspection of the schools by these physicians is a very important work, and when one considers how far-reaching is the effect on the general health of the community of precautionary and preventive measures among the school children it is easy and proper to assume that the value of the work of the school physician cannot be readily estimated.

The names of the physicians and of the schools in charge of each follow:

**Dr E. O. Tabor:** Lincoln, Laura Lee, Howard St., Eliot.

**Dr. W. G. Eaton:** Highland, Washington, Powell St., Dover St., Pine St., Middlesex Village.

**Dr. A. R. Gardner:** Pawtucket, Greenhalge, Lakeview Ave., New Moody St., Lexington Ave.

**Dr. Geo. Lavallee:** Varnum, Billings St., West Sixth St., Tenth St.

Dr. J. J. Cassidy: Green, Charles St., Worthen St., Kirk St., Cabot St., Cottage St., and Industrial for Boys.

Dr. C. M. Roughan: Moody, Pond and High St., Sycamore St., Riverside, Agawam St.

Dr. J. F. Boyle: Butler, Lyon St., Carter St., Weed St., London St.

Dr. M. J. Long: Colburn Gr. and Pri., Ames St., Edson, Central St.

Dr. J. A. Mehan: Bartlett, Franklin, Morrill, Cross St., Industrial for Girls.

Rules of the school committee governing the work of school physicians were printed in the school report of 1909.

The work of the school physicians is supplemented to a very important and valuable extent by that of the school visitor, Miss French, who devotes her time to the inspection of children in the schools, to administering or securing treatment for children who need it and to visiting their homes and advising and consulting with their parents.

### SIGHT AND HEARING TESTS.

During each school year the sight and hearing of the pupils are tested by the teachers in accordance with rules which have been prepared by the State Board of Education.

The results of the examinations which were conducted during the fall term of 1912, are summarized in the following table:

	Pupils Examined	Defective in Seeing	Per Cent. Defective	Defective in Hearing	Per Cent. Defective	Parents Notified
Primary Schools	4144	370	8.9	65	1.5	267
Grammar Schools	4747	551	11.6	92	1.9	464
High School	1292	24	1.8	13	1	37
Totals,	10,183	945	9.2	170	1.6	768

## SCHOOL SAVINGS BANKS

School savings banks were in operation at the close of the year in twenty-three of the elementary schools of the City. Aside from the fact that the sums on deposit to the credit of the various schools make a very considerable total, the effort on the part of the schools to inculcate a proper regard for thrift and the habit of saving is worthy of important consideration in any general plan for the training of children.

The table which follows gives the most suggestive data concerning school savings:

Schools	Deposits Dec.	Deposits Dec.
	31, 1911.	31, 1912.
Washington .....	\$195.88	\$502.13
Howard St. Primary .....	84.42	229.66
High St. Primary .....	19.38	78.94
Highland .....	2,497.41	3,679.53
London St. Primary .....	63.94	158.17
Pawtucket .....	882.67	1,261.36
Laura E. Lee Primary .....	265.70	518.00
Green .....	1,050.30	1,954.17
Varnum .....	4,491.65	5,308.77
Lincoln .....	1,331.68	2,292.69
Butler .....	878.69	1,678.11
Bartlett .....	783.90	1,999.63
Franklin Primary .....	32.85	168.45
Edson .....	1,373.65	1,971.86
Moody .....	2,022.57	2,806.57
Dover St. Primary .....		15.91
Eliot Primary .....		68.20
Middlesex Village .....		59.00
Sycamore St. Primary ....	52.18	189.98
Tenth St. Primary .....	640.79	970.41
Colburn .....	471.36	589.72
Greenhalge .....	1,868.85	2,246.35
Riverside .....	486.21	739.87

The accounts of the Colburn, Greenhalge and Riverside Schools are carried by the Lowell Five Cent Savings Bank, and the accounts of all other schools are carried by the Central Savings Bank.

## EVENING SCHOOLS

Two classes of pupils are to be considered in connection with the question of evening schools, those who are compelled by law to attend school in order to remove conditions of illiteracy, and those who of their own accord wish to obtain further educational advantages.

It is not unlikely that the number of those who are compelled to attend evening school will decrease constantly in succeeding years; with respect to the others, those who attend voluntarily, it may be said that they do not attend in as large numbers as might reasonably be expected; and this lack of interest has been observed in cities where especial efforts have been made to interest them.

In a busy industrial centre many boys and girls are obliged to become wage earners at an early age, and it is unquestionably true that there is an enormous loss of value in these boys and girls owing to the fact that their school life has been unreasonably shortened.

Every reasonable means should be applied and every possible effort should be made to extend the education of boys and girls who have progressed sufficiently far in the day schools to place them outside the field of compulsory evening school attendance. It should need no argument to prove that pupils who are willing to attend evening school after the wear and tear of the day's labor should have the very best in an educational way that the city can afford. A city that is unwilling to have any but the best qualified teachers to instruct children in the day schools, where conditions generally are at their best, should demand at least as high qualifications in the teachers who are to instruct pupils under conditions which are largely unfavorable. Until the city has tried out the problem of the



evening elementary school under the very best possible conditions as to instructors, supervision, general equipment, and surroundings it cannot be said truthfully that the fullest use has been made of its opportunities along this line.

Evening schools must have it in them to attract and hold the youth of the city, and the impression should prevail generally that the methods, the teaching, and the work exacted in the evening schools are of as high grade as in the day schools.

The graduation exercises of the Evening High School were held March 19, 1912, in Associate Hall; there were 76 graduates.

Peter Joseph McKone, president of the class, presented a class picture, "The Horse Fair," and the acceptance was by Mr. Charles T. McKenzie, Chairman of the Committee on Evening Schools.

The address of the evening was by Hon. David I. Walsh, and the diplomas were presented by Hon. James E. O'Donnell, Mayor of the City.

Statistics of the evening schools, and the names of the high school graduates follow.

## SUMMARY OF EVENING SCHOOL ATTENDANCE

For Term 1911-1912.

SCHOOLS	Number of Rooms in each School			Teachers at beginning of Term			Teachers at close of Term			WHOLE NUMBER ON TIME BOOKS			AVERAGE NUMBER BELONGING			AVERAGE ATTENDANCE			Per cent. of Attendance		Graduates	Minors unable to read and write
										Males	Females	Total	Males	Females	Total	Males	Females	Total				
High .....	26	28	26				542	424	966	248	208	456	228	184	412	82						
Butler .....	6	6	5				80	56	136	61	38	99	40	28	68	70	19					2
Colburn .....	6	7	8				109	68	177	100	50	150	80	40	120	80	15					51
Cabot St .....	2	4	6					92	92		84	84		73	73	79						92
Edson .....	6	9	7				145	57	202	90	42	132	72	34	106	80	12					31
Franklin .....	5	6	5				167	23	190	59	18	77	49	12	61	68						
Green—Girls' ...	4	6	8					221	221		138	138		127	127	92	7					125
Green—Boys' ...	4	8	5				190		190	73		73	64		64	87	1					88
Greenhalge .....	4	7	6				150	78	228	71	36	107	54	31	85	79	13					37
Howard St .....	1	2	1				64		64	22		22	14		14	64						40
Mann .....	8	16	16				342		342	262		262	220		220	84						56
Old Moody .....	4	4	4				57	59	116	39	51	90	30	41	71	78	1					101
Riverside .....	2	3	3				62	18	80	45	13	58	32	8	40	69	2					2
Worthen St .....	4	8	7				218		218	118		118	98		98	83						39
Totals .....	82	114	107				2126	1096	3222	1188	678	1866	981	578	1559	83	70					664

## EVENING HIGH SCHOOL GRADUATES, 1912

## Regular Course

Adams, Edward Newton	Barry, Laurette Caroline
Bowen, James Joseph	Basnett, Emma Ellen
Burke, John Joseph	Farrell, Margaret Mary
Cohen, Hymen	Farrell, Catherine Veronica
Fitzgerald William Henry	Gilchrist, Catherine
Gourke, Thomas Aloysius	Gill, Jennie Veracunda
Hart, James Patrick	Gillespie, Jeannette Wylie
Hession, Stephen Christopher	Graffam, Mabelle Esther
Higgins, Thomas A. M.	Hall, Gertrude Marie
Kilroy, James Francis	Hurley, Elizabeth Mary
Lambert, Louis Edgar	Jones, Annie Louise Francis
Lane, William Francis	Kazanjan, Mary Elizabeth
Machon, Philip Winter	Kelly, Kathryn Lillian
Mahoney, John Francis	Le Bel, Valeda Mary
Maxwell, Joseph Henry	Moore, Helen Catherine
Meagher, John Joseph	McCarron, Anna Elizabeth
Michaud, Joseph Edward	McDermott, Agnes Mary
McCabe, Charles Francis	O'Connor, Estelle Gertrude
McKone, Peter Joseph	Reagan
McNulty, Francis Joseph	Owens, Harriet Clair
McQueen, Hugh	Quinn, Winnifred Veracunda
O'Neil, Paul William	Rochford, Helen Frances
Ortel, Charles	Steinberg, Ida Esther
Owens, Daniel Joseph	Sweeney, Helen Winifred
Patrick, John Aloysius	Toohey, Loretta Frances
Reynolds, James Joseph	Tweed, Alice Winifred
Ruckledge, Thomas Raymond	Whalen, Margaret Mary
Ryan, Matthew Anthony	Tivey, Harold Edward

Sexton, Thomas Patrick	Welsh, George
Shore, Raymond Zachariah	Wholey, Daniel Aloysius
Spillane, William Joseph	Wilde, Harold Jacob
Sweeney, Felix George	Willis, Percy Lorenzo
Yates, Edward Arthur	

### Bookkeeping Course

Condon, James Patrick	Cullen, Mary Cecilia
Hayes, William Joseph	Lamb, Catherine Aloysia
Soule, Grace Mildred	

### Stenography Course

Jones, Leo Lincoln	Caddell, Ruth McKay
McGarry, John Aloysius	Carroll, Mary Alice
Furey, Delia Treasa	Dunn, Anna Louise
Kennedy, Helen Catherine	

## EVENING DRAWING SCHOOL

Term of 1911-1912

CLASSES	ROOMS			WHOLE NUMBER ON TIME BOOKS			AVERAGE NUMBER BELONGING			AVERAGE ATTENDANCE			Percent of Attendance
	Teachers at opening of Term	Teachers at close of Term		Males	Females	Total	Males	Females	Total	Males	Females	Total	
Machine .....	2	6	4	67		67	56		56	50		50	90
Architectural	1	3	3	51		51	38		38	25		25	66
Free-Hand ....	4	9	7	86	120	206	63	89	152	54	67	121	79
Totals .....	7	18	14	204	120	324	157	89	246	129	67	196	79

## EVENING DRAWING SHOOOL GRADUATES 1912

**Machine Class**

Adolf Severin Anderson  
 William Henry Cronin  
 John Francis Cunningham  
 William Edward Donahue  
 Arthur William Erickson  
 Bert Fernley  
 Charles Walter Frost  
 Samuel Lewis Fish  
 Patrick Joseph Higgins  
 Parker Ferguson Murphy  
 Frederick Aloysius O'Brien  
 William Edward Porter  
 William Regan  
 George Hudson Sykes

**Free-Hand**

Reginald Edward Cox  
 Paul Augustine Quinlan  
 John MacAulay Brown  
 Angelos Christos Ziotopoulos  
 George Francis Haggerty

**Modelling**

Cornelius Joseph Sullivan

**Architectural Class**

Delphus Zephir Clevette  
 Joseph Wilber Hall  
 Elzear O. J. Laundry  
 Gleason Harvey McCullough  
 Elmer Robert Hill

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There has never been a time when the painstaking and thorough education of the young was a matter of greater moment than now. Every municipality is engaged in very important and necessary activities; the education of its youth is only one of these, but it is the most important one. Education imposes heavy burdens upon the community, but the failure to properly train and care for the youth is sure to impose much more grievous burdens later. It is the duty of a self respecting and ambitious generation to see to it that the generation which is to follow shall be better then the one which has gone before; the proper function of education is to bring about this result.

Respectfully submitted,

HUGH J. MOLLOY,

Superintendent of Schools.

TRUANT COMMISSIONERS' REPORT

# REPORT OF THE TRUANT COMMISSIONERS FOR THE YEAR 1912.

	Total number cases investigated	Absentees	Truants	Wandering about the streets	Visited second time	Visited third time	Violating the rules of school	Arrested	Sent to the Middlesex County Training School	Placed on Probation	Prosecution of Parents	Working certificate issued—(14 to 16 yrs. of age)	Working certificates approved—over 16 yrs. of age
January .....	266	247	19	36	29	9	0	1	1	0	0	102	75
February .....	248	214	34	40	33	6	0	4	1	3	0	88	38
March ..	311	285	26	36	40	4	0	1	0	1	0	126	26
April .....	277	225	52	56	28	4	0	1	1	0	0	132	101
May .....	313	268	45	26	39	5	0	2	1	1	0	157	67
June .....	151	120	31	39	14	1	0	2	2	0	0	144	76
July .....												464	320
August .....												190	160
September .....												143	185
October .....	392	288	104	34	40	11	0	7	6	1	0	174	248
November .....	317	275	42	51	43	14	0	5	5	0	0	134	167
December ...	193	171	22	29	14	2	0	0	0	0	0	116	143
	2468	2093	375	347	280	56	0	23	17	6	0	1970	1606



# Roll of Teachers

Giving Name, Subject or Grade Taught, Residence,  
Date of Election and Salary

## HIGH SCHOOL

Kirk and Anne Sts.

CYRUS W. IRISH, Headmaster, 308 Nesmith street .....	1885	\$3000
CARL D. BURTT, Submaster and Head of Department of Languages, Clark road .....	1895	2200
FREDERICK R. WOODWARD, 168 Sixth street, Head of the Department of Mathematics .....	1895	2000
MARY A. WEBSTER, First Assistant, 45 Varney street, English and Mathematics .....	1859	1000
SUSIE L. D. WATSON, 390 East Merrimack street, United States History and Mathematics .....	1885	1000
ADELAIDE BAKER, 136 Myrtle street, French .....	1885	1000
JENNIE L. ALLEN, 947 Middlesex street, Physics and Physiology .....	1885	1000
EMMA L. BRADLEY, 485 Westford street, French .....	1890	1000
GERTRUDE A. RODLIFF, Chelmsford, Mass., History and English .....	1890	1000
MARIETTA CASSIDY, 4 Fifth avenue, Latin and Algebra .....	1890	1000
GEORGIANA F. VINTON, 52 Fourth street, History, English and Algebra .....	1872	1000
GRACE M. GOODHUE, 120 School street, Ancient History and Latin .....	1893	900
BESSIE E. HUNTOON, 64 Warwick street, French and Physiology .....	1894	900
JOHN H. BURNS, 158 Smith street, Manual Training .....	1912	800
THOS. F. FISHER, 305 East Merrimack street, Manual Training .....	1898	1600

MARY G. STEVENS, 27 Nesmith street, English and History .....	1900	900
MARY H. KILLPARTRICK, 609 Stevens street, English and Commercial Geography .....	1901	900
MARGARET V. SPEAR, 576 Westford street, French and English .....	1902	900
ETHEL M. EVERETT, 12 Belmont street, English and History .....	1905	800
ELIZABETH H. MURPHY, 159 White street, French and English .....	1905	800
ALICE RICHARDSON, 213 Branch street, Algebra .....	1905	800
ALBERT D. MACK, 16 Rutland street, Short-hand .....	1906	1500
WM. W. DENNETT, 55 Eighteenth street, Chemistry and Physics .....	1906	1300
ERNEST M. HUNT, 314 Pine street, Bookkeeping .....	1907	1500
ALICE H. BACHELLER, 195 Nesmith street, English and Commercial Law .....	1906	800
LILLIAN E. EDGERLY, 27 Anne street, Bookkeeping .....	1909	800
RAYMOND W. SHERBURNE, Tyngsboro, Mass., Greek and Latin .....	1910	1000
GRACE D. DONOVAN, 256 Branch street, English .....	1908	800
JAMES A. SHANLEY, 364 Lawrence street, Bookkeeping .....	1910	1000
MARIE R. SULLIVAN, 105 Crawford street, Shorthand .....	1911	800
CHARLES E. SEEDE, 85 Dover street, Manual Training .....	1911	1000
FLORENCE R. FOOTE, 28 Wannalancit street, History and English .....	1910	800
MILLIE A. SEVERANCE, 302 Stevens street, Physics .....	1911	700
VIOLET STOCKS, 141 Parkview avenue, Geometry, Geology, and Astromony .....	1911	700

# ROLL OF TEACHERS

55

MARY L. MARTIN, 543 Gorham street, English and Latin .....	1912	650
FRANCES U. MASTERSON, 352 Christian street, History and English .....	1912	650
MABEL M. CASSIDY, 44 B street, English, French, and Algebra .....	1912	650
MARY C. JOYCE, 22 Twelfth street, Elocution, .....	1912	650
MARGARET A. TEAGUE, 180 Mammoth Rd. Physical Culture .....	1912	650
JOSEPH G. PYNE, 823 Central street, English, French, and Algebra .....	1912	800
LIEUT. THOMAS W. DOYLE, 204 Tenth street, Military Instructor .....	1912	200
WILLIAM M. COLLINS, M. D., 22 Central street, Medical Director .....	1912	200
ALICE QUEENIE MANCHESTER, 66 Willow street, Secretary .....	1912	500

## BARTLETT SCHOOL

Wannalancit Street

HERBERT D. BIXBY, Master, 19 Rutland street .....	1908	\$1700
BELLE A. PRESCOTT, gr. 9, 68 Mt. Washington street .....	1878	700
BLANCHE A. CHENEY, gr. 9, 383 Walker street .....	1896	700
FRANCES CLARK, gr. 8, Chelmsford, Mass. .....	1899	700
AMY L. TUCKE, gr. 8, 111 Butterfield street .....	1880	700
ALICE D. SUNBURY, gr. 7, 142 Wilder street .....	1899	700
KATHLEEN E. DRISCOLL, gr. 7, 47 Grace street .....	1911	650
BELLE F. BATCHELDER, gr. 6, 66 Arlington street .....	1883	700
SARA E. AMES, gr. 6, 418 Walker street .....	1902	700
MARIA W. ROBERTS, gr. 5, 571 Westford street .....	1875	700
KATHERINE F. FARLEY, gr. 5, 12 Robert street .....	1907	700

IVAH M. CONNELL, gr. 4, 660 School street	1910	650
A. GERTRUDE STILES, gr. 4, 72 Varney street	1895	700
LILLIAN E. ALISTER, 15 Stavelly street ....	1911	650

### Primary Department

BRIDGET K. SMITH, gr. 3, 117 Stackpole street .....	1904	\$ 650
BERTHA M. SHERBURNE, grs. 3 and 2, Tyngsboro, Mass. ....	1911	650
ELEANOR J. LELACHEUR, gr. 2, 130 Avon.. street .....	1910	650
ESSIE E. ROCHE, gr. 1, 1835 Middlesex street	1903	650
E. BELLE PERHAM, gr. 1, 90 Riverside street	1893	700

### MORRILL SCHOOL

#### Common and Adams Streets

ANNA M. COURTNEY, Prin., gr. 1, 196 Pawtucket street .....	1887	\$ 750
AGNES T. COURTNEY, gr. 3, 11 Marsh street	1891	700

### CROSS STREET SCHOOL

#### Cross Street between Fletcher and Mt. Vernon Streets

SARAH E. SCALES, Principal, gr. 3, 14 Porter street .....	1866	\$ 750
ELLEN M. WHITE, gr. 2, 1057 Middlesex street	1863	700
KATHERINE KELLY, gr. 1, 24 Columbus ave	1893	700

### BUTLER GRAMMAR SCHOOL

#### Gorham Street

CORNELIUS F. CALLAHAN, Master, 549 Westford street .....	1885	\$2000
NELLIE F. MURPHY, gr. 9, 85 Sherman street	1878	700
MARGUERITE J. CRONIN, gr. 9, 228 Plain street .....	1900	700
MARY E. LANE, gr. 8, Billerica, Mass. ....	1894	700

# ROLL OF TEACHERS

57

SADIE E. TULLY, gr. 8, 105 Westford street	1897	700
DELIA T. BRADY, gr. 7, 183 Chapel street ...	1883	700
KATHERINE E. KELLEY, gr. 7, 201 Appleton street .....	1883	700
ALICE C. O'BRIEN, gr. 7, 300 Wilder street ..	1897	700
ANNIE J. DEVINE, gr. 7, 128 Carlisle street	1901	700
MARY L. CROWLEY, gr. 6, 201 Appleton street .....	1902	700
HELEN L. CLARK, gr. 6, 297 East Merrimack street .....	1908	650
MARY L. McSORLEY, gr. 5, 40 Huntington street .....	1879	700
ETTA G. BURNS, gr. 5, 329 Concord street ..	1901	700
KATHERINE M. USHER, gr. 4, 465 Parker street .....	1895	700
KATHERINE M. JANTZEN, gr. 4, 3 Olive street .....	1902	700
MARGARET G. HYDE, gr. 4, 5 Floyd street	1902	700
MARY G. QUINN, gr. 4, 28 Chapel street ....	1906	650

## LYON STREET SCHOOL

Corner Lyon and Central Streets

KATE F. MURPHY, Principal, gr. 3, 870 Gorham street .....	1885	\$ 750
MARY J. McCARRY, gr. 1, 1600 Gorham street	1881	700
LORETTA A. HANNAFIN, gr. 2, 15 Sargent street .....	1910	650
ELLEN F. LYNCH, gr. 1, 11 Salem street ..	1910	650
GERTRUDE B. McQUADE, grs. 2 and 1, 225 Summer street .....	1912	650

## CARTER STREET SCHOOL

Carter Street

ISABELLA T. VINALL, Principal, gr. 3, 1 Glidden avenue .....	1873	\$ 750
MARGARET J. CONNORS, gr. 2, 48 Walnut street .....	1894	700

KATHERINE F. BRADY, gr. 2, 173 Chapel street .....	1897	700
MARY V. JOHNSON, gr. 1, 183 Wilder street .....	1897	700
DELIA C. MALONEY, gr. 1, 70 Elm street ....	1901	700

### AGAWAM STREET SCHOOL

Agawam and Barrington Streets

MARY A. FAY, Principal, gr. 3, 115 Stackpole street .....	1889	\$ 750
ANNA M. HIGGINS, gr. 2, North Billerica ...	1910	650
EUGENIE V. FRAPPIER, gr. 1, 26 Hampshire street .....	1910	650

### LONDON STREET SCHOOL

Corner of London and West Streets

ELIZABETH R. MAGUIRE, Principal, gr. 3, 60 Fort Hill avenue .....	1884	\$ 750
MARGARET L. HAGERTY, gr. 1 and 2, 31 Royal street .....	1908	650
MARY F. HILL, gr. 1 and 2, 94 Midland street .....	1887	700

### WEED STREET SCHOOL

Corner of Weed and Gorham Streets

LILLA M. McEVOY, Principal, gr. 3, 214 Pawtucket street .....	1893	\$ 750
MARY E. CROWLEY, gr. 2, 436 Lincoln street .....	1905	650
MARY F. DEVINE, gr. 1, 1527 Gorham street .....	1902	650

### COLBURN GRAMMAR SCHOOL

Lawrence Street, near Charles

HELEN M. SHEAN, Principal, 260 High street .....	1891	\$1000
MARGARET C. FOX, gr. 9, 8 Eddy street ....	1900	700
ANNA T. McCARRON, gr. 8, 228 High street .....	1910	650
LENA COLLINS, gr. 7, 1106 Mammoth road, Collinsville .....	1911	650



# ROLL OF TEACHERS

59

JULIA M. DRISCOLL, gr. 6, 47 Grace street	1911	650
FRANCES L. DONOVAN, gr. 6, 168 Shaw street .....	1911	650
MARY J. MOYNAHAN, gr. 5, 216 High street	1911	650
LOUISE C. THOMAS, gr. 5, 40 West Sixth ..	1911	650
SADIE A. CONNOR, gr. 4, 73 Pleasant street	1911	650
ELIZABETH A. CONWAY, gr. 4, 219 Church street .....	1911	650

## COLBURN PRIMARY SCHOOL

Charles Street, near Lawrence

ELLEN M. HOLDEN, Principal, gr. 3, 2191 Lakeview avenue .....	1876	\$ 750
NELLIE F. DAVIDSON, gr. 2, 559 Fletcher street .....	1891	700
CLOTILDA A. DELANY, 82 Colonial avenue	1910	650
KATHERINE M. TOBIN, gr. 1, 40 Linden street .....	1910	650

## CENTRAL STREET SCHOOL

Central Street, opp. Hudson

ELIZA COWLEY, Principal, gr. 3, 484 Rogers street .....	1857	\$ 750
ELIZABETH G. LAWLER, gr. 2, 260 High st.	1897	700
ANNA T. COBURN, gr. 2, 39 Arlington street	1904	650
HELEN A. DRURY, gr. 1, 44 Walnut street	1897	700

## AMES STREET SCHOOL

Corner Lawrence and Ames Streets

MARY E. DREW, Principal, gr. 2, 36 Wamesit street .....	1868	\$ 750
MARY C. TIMMONS, gr. 3, 1164 Middlesex street .....	1911	650
EDITH FARRINGTON, gr. 1, 182 Perry street	1905	650

**EDSON GRAMMAR SCHOOL**

Highland Street

CALVIN W. BURBANK, Master, 130 Bowers street .....	1872	\$2000
CHRISTOPHER J. HAGAN, Acting Master, 94 D street .....	1300	
FRANCES M. WEBSTER, gr. 9, 45 Varney street .....	1873	700
ROSALIE T. BURNS, gr. 8, 39 Whitehead avenue .....	1878	700
ANNIE E. DONOVAN, gr. 8, 26 Madison street	1895	700
SUSAN F. BURBANK, gr. 6 and 7, 50 John street .....	1910	650
KATE J. HAYES, gr. 6 and 7, 15 Floyd street	1879	700
MARGIE F. MARREN, gr. 6, 86 Rolfe street	1886	700
SARAH J. CROSBY, gr. 5 and 6, 12 Simpson place .....	1868	700
JENNIE E. ROGERS, gr. 5, 418 Walker street.	1904	650
JULIA B. RIORDAN, gr. 4, 58 Second avenue	1897	700
MARIANNA L. DONOVAN, gr. 4, 256 Branch street .....	1911	650
ALICE O. STICKNEY, gr. 4, 599 School street	1910	650

**CHARLES STREET SCHOOL**

Charles Street, between Gorham and Chapel Streets

ALICE T. OWENS, Principal, gr. 3, 4 Belmont street .....	1878	\$ 750
ELLA E. GARDNER, gr. 1 and 2, 246 Appleton street .....	1871	700
MARION A. STEVENS, gr. 1 and 2, 465 Westford street .....	1908	650
MARGARET A. HARRAHAN, gr. 1, 32 Marshall street .....	1882	700

**COTTAGE STREET SCHOOL**

Corner Cottage and Chapel Streets

ROSE E. MacVEY, Principal, gr. 2, 46 Linden street .....	1887	\$ 750
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ANNIE L. MURPHY, gr. 3, 870 Gorham street	1901	700
E. LAURA MOORE, gr. 1, 21 Kimball avenue	1905	650

### ELIOT SCHOOL

Corner Favor and Summer Streets.

ELLEN A. STILLINGS, Principal, gr. 1 and 2, 24 Bellevue street .....	1875	\$ 750
ELLEN A. CORBETT, gr. 3, 32 Highland st	1878	700
NELLIE T. O'GRADY, gr. 2, 623 Central street	1881	700
LOYOLA McCANN, gr. 1, 17 Wentworth ave	1893	700

### GREEN GRAMMAR SCHOOL

Merrimack Street

ALBERT L. BACHELLER, Master, 195 Ne- smith street .....	1874	\$2000
RUTH B. BAILEY, gr. 9, 11 Burlington Ave.,	1871	700
CLARA A. HANNAFORD, gr. 8, 466 Wilder...	1869	700
LIZZIE A. NOLAN, gr. 7, 214 Pawtucket street	1876	700
FLORENCE E. ARCHIBALD, gr. 7, 50 John street .....	1911	650
JENNIE E. FAY, gr. 6, 115 Stackpole street....	1891	700
HANNAH M. BARROWS, gr. 6, 19 Newhall street .....	1908	650
CATHERINE F. McCARTHY, gr.5, 647 Market street .....	1889	700
SADIE F. McCORT, gr. 5, 15 Centre street....	1901	700
ELLA J. CARLETON, gr. 4, 35 Gates street...	1882	700
ELIZABETH PROVENCHER, gr. 4, 523 Flet- cher street .....	1908	650
M. ALICE McCUE, gr. 4, 781 Broadway .....	1912	650

### KIRK STREET SCHOOL

Corner Kirk and Lee Streets

ELIZA A. DAVIS, Principal, gr. 2 and 3, Billeri- ca, Mass. ....	1881	\$725
LAURA H. PALMER, grs.1 and 2, 35 Thirteenth street .....	1882	700

**CABOT STREET SCHOOL**

Corner Cabot and Ford Streets.

MARY T. WHELLEY, Principal, gr. 2 and 3, 254 Parkview ave. ....	1897	750
EUGENIA L. HOGAN, gr. 1 and 2, 106 Avon street .....	1889	700
MARY J. MURPHY, gr. 1, 34 Butterfield street	1887	700

**WORTHEN STREET SCHOOL**

Worthen Street, between Market Street and Broadway

ESTHER V. GREEN, Principal, gr. 2, 434 West- ford street .....	1889	\$750
MARY R. MARREN, gr. 3, 86 Rolfe street....	1890	700
MARY E. MEEHAN, gr. 1, 228 Worthen street.	1891	700

**GREENHALGE GRAMMAR SCHOOL**

Ennell Street, Centralville

FREDERICK A. WOOD, Master, 295 Pawtu- cket street .....	1906	\$1900
MARY E. TOBIN, gr. 9, 40 Linden street .....	1906	650
GRACE E. FRYE, gr. 8, Billerica, Mass. ....	1910	650
MARY ALICE COCHRANE, gr. 7, 230 Cabot street .....	1911	650
LEONA M. SMALL, gr. 6, 46 Whitney avenue	1911	650
MARY R. SEERY, gr. 6, 237 Tenth street ....	1911	650
JOSEPHINE S. DUNLAVY, gr. 5, 22 Lagrange street .....	1908	650
ALICE A. MASTERSON, gr. 5, 60 Fort Hill avenue .....	1892	700
ANNIE L. MAHONEY, gr. 4, 41 Butterfield street .....	1906	650
HELEN KOHAWN, gr. 4, 63 Thirteenth street	1877	700

**GREENHALGE PRIMARY**

MARTHA ROGERS, gr. 3, 131 Cumberland road .....	1895	\$ 700
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IDA J. CLARKE, gr. 2, 166 Branch street .....	1887	700
BLANCHE E. MARSHALL, gr. 1, 48 Marginal street .....	1908	650

### LAKEVIEW AVENUE SCHOOL

Lakeview Avenue, Centralville

MARGARET J. McCLUSKEY, gr. 3, 246 Methuen street .....	1890	\$ 750
ALICE E. RAMSAY, gr. 2, 124 Third street ...	1906	650
ANNA F. JOYCE, gr. 1 and 2, 22 Twelfth street	1906	650
ANNIE E. IRVING, gr. 1, 82 Stone street, Dracut, Mass. ....	1908	650

### HIGHLAND GRAMMAR SCHOOL

Pine Street

CHARLES W. MOREY, Master, 14 Belmont street .....	1880	\$2000
ESTELLE L. WHITNEY, gr. 9, 13 Oakland street .....	1885	700
MARY F. FOSS, gr. 9, 248 Foster street .....	1891	700
ABBIE F. WOODWARD, gr. 8, 157 Dartmouth street .....	1869	700
ANNA T. COFFEY, gr. 8, 182 Wilder street ....	1910	650
LEONORA K. BATTLES, gr. 7, 21 Chester st.	1895	700
ANNA A. BURNHAM, gr. 7, 14 Belmont street	1894	700
LUELLA A. WARDWELL, gr. 6, 13 Oakland street .....	1870	700
MINNIE C. GRAY, gr. 6, 106 Liberty street ....	1890	700
GRACE R. SANDERS, gr. 5, 67 South Loring street .....	1897	700
LULU TURNER, gr. 5, 33 Warwick street ....	1900	700
GRACE F. WARD, gr. 5, 201 Appleton street ..	1893	700
C. ETHEL HALE, gr. 4, 15 Robbins street ....	1906	650
MABEL E. BROWN, gr. 4, 172 Branch street ..	1901	700
ARVILLA L. READER, gr. 4, 216 Appleton st.	1871	700
MARTHA R. TAYLOR, 146 Sixth street .....	1912	650
CARRIE L. BROWN, 18 Bourne street .....	1912	650



**FRANKLIN SCHOOL**

• Corner Branch and Middlesex Streets

SARAH C. FISKE, Principal, gr. 3, 246 Appleton street .....	1866	\$ 750
MARY E. RICHARDSON, gr. 2, 55 Liberty st.	1910	650
MARION J. STEVENSON, gr. 1 and 2, 63 Princeton street .....	1878	700
KATE G. JONES, gr. 1, 240 Jewett street .....	1880	700

**PINE STREET SCHOOL**

Corner Pine and Gibson Streets

CARRIE J. BAILEY, Principal, gr. 3, 16 Loring street .....	1884	\$ 750
GRACE I. WASHBURN, gr. 2, 233 Westford street .....	1897	700
HELEN D. SWAIN, gr. 1, 413 Walker street	1904	650

**DOVER STREET SCHOOL**

Dover Street, between Middlesex and Grove Streets

CLARA B. HORNE, Principal, gr. 3, 106 Chestnut street .....	1877	\$ 750
CLEMENTINE H. BOWERS, gr. 2, 18 Loring street .....	1876	700
BERTHA GARDNER, gr. 1, 32 Robbins street	1887	700

**MIDDLESEX VILLAGE SCHOOL**

Middlesex Street, corner Cornell Street

HARRIET F. WAKEFIELD, Principal, gr. 5 and 6, 497 School street .....	1889	\$ 750
KATHERINE G. EGAN, gr. 3 and 4, 17 Princeton street .....	1904	650
GERTRUDE E. DANE, gr. 2, 234 Gibson street	1905	650

**POWELL STREET SCHOOL**

Powell Street, near Liberty Street

VIOLA A. HAMBLETT, Principal, gr. 1 and 2, 58 Bellevue street .....	1876	\$ 725
ELLEN J. PIPER, gr. 2 and 3, 55 Norcross street .....	1894	700

**ABRAHAM LINCOLN GRAMMAR SCHOOL**

## Chelmsford Street

JAMES L. MELLEN, Master, 74 Pentucket avenue .....	1893	\$2000
MARGARET M. SPARKS, gr. 9, 169 Fort Hill avenue .....	1894	700
GRACE SCRIBNER, gr. 8, 190 Liberty street	1893	700
BRIDE T. SWEENEY, gr. 7, 138 Pleasant st	1900	700
IRMA V. HODGMAN, gr. 7, 632 Westford street	1897	700
MARGARET T. DONOVAN, gr. 6, 42 Clare street .....	1911	650
MARGARET G. McDONALD, gr. 6, 397 Broadway .....	1904	650
MABEL W. EWINGS, gr. 5, 3 Astor street....	1891	700
ANNIE L. McKISSOCK, gr. 5, 9 Third street	1912	650
ELLA E. PRESCOTT, gr. 4, 601 Aiken street, Dracut .....	1894	700
ELLEN L. FLOYD, gr. 4, 124 Stevens street	1887	700
JULIA G. SLATTERY, gr. 4, 65 Arlington st	1911	650

## Primaries in Lincoln School Building

ELSIE M. PUFFER, gr. 1, 942 Middlesex street	1901	700
LILLIAN A. STROUT, gr. 1, 95 So. Loring street .....	1906	650

**LAURA E. LEE SCHOOL**

## Corner Plain and Powell Streets

FLORA H. SPRAGUE, Principal, gr. 3, 589 School street .....	1882	\$ 750
LENA M. ROBINSON, gr. 2 and 3, 68 So. Walker street .....	1898	700
LILLA M. STANLEY, gr. 2, 2 Horn street ....	1897	700
SADIE M. DEANE, gr. 1 and 2, 17 Loring street	1902	700
MINNIE E. COBURN, gr. 1, 157 Smith street	1910	650
EMMA M. GRAHAM, gr. 1, 419 Chelmsford.. street .....	1912	650

**HOWARD STREET SCHOOL**

Howard Street, between Chelmsford and Hale Streets.

MARION E. GREEN, Principal, gr. 3, 96 Pine st	1884	\$ 750
MARGARET S. JAMIESON, gr. 2, 53 So. Loring street .....	1904	650

**GRAND STREET SCHOOL**

Grand Street, between Westford and Middlesex Streets

JENNIE M. BENNETT, gr. 2 and 3, 2 Bellevue street .....	1885	\$ 700
CHARLOTTE A. PARSONS, gr. 1, 485 Westford street .....	1910	650

**MOODY GRAMMAR SCHOOL**

Corner High and Rogers Streets

WILLIAM S. GREEN, Master, 302 Nesmith street .....	1883	\$2000
NELLIE C. MAHONEY, gr. 9, 17 North street	1898	700
IDA L. SAMUELS, gr. 9, 56 Fifth avenue .....	1898	700
BERTHA M. ROWLANDSON, gr. 8, 11 Holyrood avenue .....	1891	700
FANNIE G. HOBBS, gr. 8, 5 Astor street ....	1910	650
ELLA M. BREEN, gr. 7, 23 Marsh street .....	1893	700
MARTINA F. McMAHON, gr. 7, 33 Mead street	1905	650
FLORA A. OWEN, gr. 6, 42 Huntington st.	1900	700
ANASTASIA E. DOWNING, gr. 6, 434 Westford street .....	1908	650
FRANCES E. HARDMAN, gr. 5, 18 Astor st	1873	700
FRANCES E. GARRITY, gr. 5, 61 Twelfth st	1874	700
CORA E. JONES, gr. 4, Y. W. C. A., John street	1910	650
EDITH T. SANBORN, gr. 4, 260 Mansur street	1911	650

**POND AND HIGH STREET SCHOOL**

High Street, Belvidere

CLARA A. EMERSON, Principal, gr. 2, 216 Appleton street .....	1869	\$ 750
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# ROLL OF TEACHERS

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GERTRUDE SEEDE, gr. 3, 85 Dover street ..	1906	650
MARY I. HALLORAN, gr. 2, 546 East Merrimack street .....	1908	650
ADELAIDE CROWLEY, gr. 1, 115 Fort Hill avenue .....	1894	700
MAUDE E. GREEN, gr. 1, 238 East Merrimack street .....	1900	700

## SYCAMORE STREET SCHOOL

Sycamore Street

FLORENCE E. ROWELL, Principal, gr. 2 and 3, 60 Porter terrace .....	1900	\$ 725
ELIZABETH B. DAME, gr. 1 and 2, 178 First street .....	1902	700

## PAWTUCKET GRAMMAR SCHOOL

Mammoth Road, Pawtucketville

WILLIAM P. BARRY, Master, 1280 Middlesex street .....	1887	\$2000
ELLEN M. MacDONALD, gr. 9, 214 Pawtucket street .....	1878	700
M. ISABELLA PHELPS, gr. 8, 50 Lamb street	1908	650
DELIA F. BRISCOE, gr. 7, Dracut .....	1912	650
ELIZABETH G. COMMON, gr. 6, 109 Beech st	1911	650
CHARLOTTE C. WALSH, gr. 6, 76 Mt. Vernon street .....	1902	700
GOLDIE M. GARDNER, gr. 5, 15 Columbus avenue .....	1898	700
CORINNA G. COVER, gr. 4, 16 Lombard street	1901	700

## NEW MOODY STREET SCHOOL

New Moody Street

ADDIE B. MERRILL, Principal, gr. 3, 465 Bridge street .....	1892	\$ 750
GRACE C. DELANY, gr. 2 and 3, 82 Colonial avenue .....	1900	700

ANNA I. CASSIDY, gr. 2, 4 Fifth avenue .....	1902	700
KATHERINE P. O'BRIAN, gr. 2, 28 West Adams street .....	1911	650
MARY E. SNOW, gr. 1, 89 School street .....	1901	700
MAUDE M. HARDY, gr. 1, 171 Walker street	1901	700

### LEXINGTON AVENUE SCHOOL

CARRIE M. HART, 16 Varney street .....	1887	\$ 725
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### RIVERSIDE GRAMMAR SCHOOL

Woburn Street, Wigginvillie

PATRICK J. REYNOLDS, Master, 139 Chapel street .....	1912	\$1300
HARRIET L. WHEELER, gr. 9 and 8, 64 Mor- ton street .....	1900	700
ELIZABETH A. GILINSON, gr. 6, 3 Bourne st	1910	650
FRANCES J. CUNNINGHAM, gr. 5, 517 Rogers street .....	1906	650

### RIVERSIDE PRIMARY SCHOOL

CHISTINE M. KANE, gr. 3, 339 High street	1908	\$ 650
ETTA M. SMITH, gr. 2, 1118 Lawrence street	1906	650
CHARLOTTE O. LOWE, gr. 1, North Chelms- ford, Mass .....	1910	650

### VARNUM GRAMMAR SCHOOL

Myrtle Street, Centralville

(Telephone 2326)

HENRY H. HARRIS, Master, 93 Eleventh street	1893	\$2000
ELIZABETH C. KENNEDY, gr. 9, 106 Durant street .....	1884	700
MARY F. WING, gr 9, 3 Myrtle street .....	1879	700
AGNES BAILEY, gr. 8, 53 Third street .....	1900	700
DAISY B. MacBRAYNE, gr. 8, 24 Beech street .	1900	700
GRACE W. BALCH, gr. 7, 117 Third street ....	1894	700



ANNIE V. DONOGHUE, gr. 7, 11 Wesley street	1904	650
MARY A. FAY, gr. 6, 303 Tenth street .....	1898	700
AGNES T. FAY, gr. 6, 303 Tenth street .....	1891	700
ROSE A. DOWD, gr. 6, 237 Tenth street .....	1884	700
GRACE M. THURBER, gr. 5, 52 Fourth street	1910	650
ALICE R. KEESE, gr. 5, 107 Warwick street	1881	700
ADA E. HOOLE, gr. 5, 173 Warren street ....	1894	700
MARGARET F. HOWE, gr. 5, 208 South street	1900	700
JULIA WILLIAMS, gr. 4, 156 Sixth street ....	1886	700
MABEL A. METCALF, gr. 4, 93 Vernon street	1908	650
VERA E. GROVES, 53 Thirteenth street .....	1912	650

### WEST SIXTH STREET SCHOOL

West Sixth Street, between Coburn and Jewett Streets  
Centralville

STELLA J. ALLEN, Principal, gr. 3, 115 Third street .....	1879	\$ 750
ELIZABETH Fê LAMERE, gr. 2, 63 Canton st.	1887	700
MARION S. KEYES, gr. 1 and 2, 102 Third st.	1888	700
MARY J. CALLAHAN, gr. 1, 117 Durant street	1895	700

### TENTH STREET SCHOOL

Corner Tenth and Varnum Streets, Centralville

MARY F. BEANE, Principal, gr. 3, 212 Tenth st.	1879	\$ 750
FANNIE H. MURPHY, gr. 2, 42 Twelfth street	1889	700
ALICE A. HOLTHAM, gr. 1 and 2, 1107 Bridge street .....	1887	700
ELLA A. BAILEY, gr. 1, 16 Varnum street ....	1869	700

### BILLINGS STREET SCHOOL

ANNIE M. ROBBINS, Principal, gr. 3, 62 Twelfth street .....	1895	\$ 750
RUTH CROWELL, gr. 2 and 3, 71 Fort Hill avenue .....	1911	650
ELIZABETH H. SEEDE, gr. 1, 85 Dover street	1906	650
MARIETTA G. GORMLEY, gr. 1, 22 Lyon st.	1895	700

**WASHINGTON GRAMMAR SCHOOL**

Lang Street, opposite Inland

JOHN E. BARR, Master, 178 First street . . . . .	1906	\$1400
HELEN A. DOW, gr. 9, 149 B. street . . . . .	1905	650
SUSAN C. GRIFFIN, gr. 8, 36 Grace street . . . . .	1906	650
ESTHER M. GREENE, gr. 7, 179 Warwick st. . . . .	1906	650
ALICE G. McGILLY, gr. 6, 149 Concord st. . . . .	1911	650
LAURA F. GREENE, gr. 5, 179 Warwick st. . . . .	1911	650
OLIVE J. PALM, gr. 4, 255 Plain street . . . . .	1911	650

**PRIMARY DEPARTMENT**

MYRTLE M. KILLPARTRICK, gr. 1, 609 Stevens street . . . . .	1911	\$ 650
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**KINDERGARTENS****AGAWAM STREET**

SARAH G. SPARKS, Principal, 59 Elm street . . . . .	1894	\$ 550
KATHERINE M. CROWLEY, 115 Fort Hill avenue . . . . .	1908	500

**BARTLETT**

HELEN W. NOYES, Principal, 49 Nesmith st . . . . .	1896	\$ 550
EDITH A. ANDREWS, 77 Fort Hill avenue . . . . .	1897	500

**CHAPEL STREET**

ELSIE M. CRAGIN, Principal, 114 So. Walker street . . . . .	1895	\$ 550
KATHERINE C. EARLY, 181 Pleasant street . . . . .	1896	500

**CHARLES STREET**

MABEL D. NICKERSON, Principal, 136 Chest- nut street . . . . .	1893	\$ 550
S. ALICE KNAPP, 336 East Merrimack street . . . . .	1899	500

**DOVER STREET**

ELIZABETH A. WILSON, Principal, 15 South Canton street .....	1893	\$ 550
ELLA M. PENN, 262 London street .....	1901	500

**FRANKLIN**

N. GRACE TAYLOR, Principal, 11 Ware street	1895	\$ 550
HORTENSE M. LAMERE, 13 Ralph street ....	1899	500

**LAURA E. LEE**

EDITH A. HOWITT, Principal, 52 Myrtle st.	1897	\$ 550
ALICE F. SEETON, 158 Mammoth road .....	1901	500

**MOODY**

MARY C. WALKER, Principal, 100 Appleton st.	1893	\$ 550
GERTRUDE B. CROWLEY, 115 Fort Hill ave	1909	500

**PAWTUCKET**

MARIETTA KING, Principal, 205 Stackpole st.	1895	\$ 550
S. HORTENSE TABOR, 82 Riverside street	1896	500

**PINE STREET**

LOUIE I. SMITH, Principal, 11 Edson street	1895	\$ 550
GERTRUDE A. ROBERTS, 74 Stevens street	1897	500

**VARNUM**

NETTIE M. CONANT, Principal, 113 Fremont street .....	1892	\$ 550
CLARA M. EVERETT, 75 Beacon street ....	1896	500
HELEN S. LIVINGSTON, temp., 28 Robbins st.		

**SCHOOL VISITOR**

ALICE M. FRENCH, Y. W. C. A., John street	1909	\$ 650
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## ROLL OF TEACHERS

## MUSICAL DIRECTOR

FREDERICK O. BLUNT, Tel. 3511, 21 Bellevue street ..... 1898 \$1250

## ASSISTANT IN MUSIC

JESSIE M. HAGAR, Tel. 1804-W, 237 Branch street ..... 1911 \$ 800

## SUPERVISORS OF DRAWING

OLIVE E. UNDERHILL, 117 Branch street .. 1887 \$ 750  
ADDIE E. EDWARDS, Tel. 1128-W., 57 Pine street ..... 1907 750

## TEACHER OF SEWING

IDA J. FLINT, Tel. 2641-W., 200 Liberty st. 1880 \$ 900

## ASSISTANT IN SEWING

ESTHER M. OWENS, Tel. 3620, 4 Belmont st. 1912 \$ 700

## INDUSTRIAL SCHOOL

Old Bartlett School Building, Clark Street.

Mann School, Broadway, Tel. 2932.

WILLIAM H. DOOLEY, Principal, 67 Burt st. 1911 \$2500  
CLARA I. FARRINGTON, 2 Perry street,  
Assistant to Mr. Dooley ..... 1912 600  
WILLIAM A. WEBB, 50 Mt. Vernon street,  
Instructor in Machine Shop Practice and  
Blacksmithing ..... 1911 1200  
WALTER F. CONNOLLY, 84 School street,  
Assistant in Machine Drawing and Mathemat-  
ics ..... 1911 750  
FRED F. WIGGIN, 710 Stevens street, In-  
structor in Carpentry ..... 1911 900  
CLARENCE E. LESUER, 16 Midland street,  
Instructor in Automobile Repairing ..... 1911 800

## ROLL OF TEACHERS

73

HERBERT L. CARRAGHER, 365 Beacon street, Instructor in Electricity .....	1911	800
TIMOTHY H. REARDON, 16 Marginal street, Assistant in Machine Shop Practice and Blacksmithing .....	1912	900
CHARLES J. RODGERS, 65 Butterfield street, Assistant in Carpentry .....	1912	800
JOHN F. GALLAGHER, 58 Seventh street, Assistant in Electricity .....	1912	700
F. JOSEPH O'DONOGHUE, 239 School street, Academic Branches .....	1912	800

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## GIRLS' DEPARTMENT

Morrill School Building, Common Street

ALICE L. GOOKIN, 824 Rogers street, Academic Branches .....	1911	\$ 800
RUBERTA BRAMHALL, 84 Tenth street, Housekeeping .....	1911	800
ANNA M. O'DAY, 599 Central street, Dress-making .....	1911	750
ESTHER M. DOWNING, 434 Westford street, Drawing, Arithmetic and Textiles .....	1912	750
ESTHER G. DONLAN, 196 Westford street, Housekeeping .....	1912	800
AGNES R. BURNS, 427 Lakeview avenue, Assistant in Dressmaking .....	1912	650

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## ABSENT ON LEAVE

Ethel W. Whitcomb, High School, '03, Box 620, Manila, P. I.  
 Katherine Kelly, Cross st., '93, 24 Columbus Ave.  
 Calvin W. Burbank, Edson School, '72, 130 Bowers st.  
 Mary F. Foss, High School, '91, 248 Foster street.  
 Grace R. Sanders, Highland School, '97, 67 So. Loring street.  
 Bertha M. Rowlandson, Moody School, '91, 11 Holyrood Ave.  
 Mary F. Wing, Varnum School, '79, 3 Myrtle street.



Agnes T. Fay, Varnum School, '91, 303 Tenth street.  
Grace M. Thurber, Varnum School, '10, 52 Fourth street.  
Alice B. Besse, New Moody, '91, 581 Rogers school.  
May E. P. Lowney, unassigned, '10, 40 Crowley street.  
Helen J. O'Hearn, Lincoln School, '00, 649 Westford street.  
Helen M. Whitcomb, unassigned, '11, 2 Belmont street.

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### PERMANENT SUBSTITUTES

Mollie M. Brosnan, 210 Cross street.  
Mary M. Cowell, 1032 Gorham street.  
Elizabeth R. Connell, 24 Ash street.  
Anna J. Cawley, 85 Rogers street.  
Mary F. Carolan, 256 Concord street.  
Ethel Chalifoux, 157, Mt. Vernon street.  
Caroline Downey, 56 Huntington street.  
Alice G. Donohoe, 50 Linden street.  
Ellen L. Daley, 134 Lilley Ave.  
Henrietta Grady, 39 Lunberg street.  
Rose C. Geary, 49 Whipple street.  
Helen R. Halloran, 546 E. Merrimack street.  
Mae Hogan, 82 Varney street.  
Alice L. Joyce, 22 Twelfth street.  
Gertrude Keyes, 62 Pine street.  
Bethia S. Keith, 419 Chelmsford street.  
Loretta M. Kinsela, 6 Burns street.  
Alice M. Lynch, 11 Salem street.  
Anna L. McNabb, 63 Dunfey street.  
Frances Noonan, 115 Pleasant street.  
Julia O'Sullivan, 105 Mt. Washington street.  
Marietta O'Neil, 11 Carter street.  
Mary J. Reardon, 16 Marginal street.  
A. Lillian Walsh, 145 Mammoth Rd.

**TEACHERS' CERTIFICATES**

Granted since January 1, 1908

**First Grade**

Dennis A. Murphy, University of America, '08, 349 Broadway.  
Joseph G. Pyne, Holy Cross, '10, 823 Central street.  
George F. Lee, Boston College, '09, 536 Gorham street.  
John E. Robinson, Bates, '06, Goffstown, N. H.  
Arthur B. Barnes, Dartmouth, '08 30 Huntington street.  
Raymond W. Sherburne, Dartmouth, '08, Tyngsboro, Mass.  
Charles E. Seede, Tufts, 85 Dover street.  
Patrick J. Reynolds, Holy Cross, '12, 139 Chapel street.

**Second Grade**

May D. Stone, Mt. Holyoke, '08, 63 Royal street.  
Helen M. Whitcomb, Smith, '08, 2 Belmont street.  
Anna C. Chandler, Wellesley, '09, 5 Concord terrace, South Framingham.  
Lucy P. Hall, Smith, '06, 135 Hildreth street.  
Frances M. Masterson, Radcliffe, '10, 352 Christian street.  
Josephine A. Boynton, Smith, '08, 101 Livingston avenue.  
Mary L. Martin, Smith, '10, 547 Gorham street.  
Helen Guyton, Boston University, 159 Mammoth road.  
Elizabeth Spalding, Simmons, '09, 1016 Middlesex street.  
Millie A. Severance, Smith, '09, 202 Stevens street.  
Margaret M. Cassidy, Boston University, '08, 44 B street.  
Maud E. McManama, Boston University, '09, 162 Summer st., Waltham.  
Myrtle M. Killpartrick, Tufts, '09, 915 Bridge street.  
Mary W. Sawyer, Wellesley, '11, 915 Bridge street.  
Genieve E. Lawrence, Wellesley, '12, 53 Berkeley Ave.  
Mary E. Quirbach, Smith, '12, 134 Gorham street.  
Ellen E. McQuade, Trinity, '12, 318 Andover street.  
Hannah E. Moors, Wellesley, '12, 104 Moore street.  
Hope Hearn, Radcliffe, '12, 536 Fletcher street.

**Third Grade**

Marietta G. Gormley, Lowell Normal, 22 Lyon street.  
 Katherine C. Early, Lowell Normal, 181 Pleasant street.  
 Katherine M. Crowley, Lowell Normal, 115 Fort Hill Ave.  
 Gertrude B. Crowley, Lowell Normal, 115 Fort Hill Ave.  
 Elsie M. Cragin, Lowell Normal, 114 So. Walker street.

**Fourth Grade**

Helen S. Livingston, Lowell Normal, '05, 28 Robbins street.  
 Helen B. Webster, Lowell Normal, '08, 69 Myrtle street.  
 Myra L. Stacy, Lowell Normal, '08, 16 Fairfield street, Haverhill, Mass.  
 Josephine A. Boynton, Lowell Normal, '03, 101 Livingston ave.  
 Catherine Dunn, Lowell Normal, '10, West Chelmsford, Mass.  
 Elsie M. Dustin, Lowell Normal, '10, 79 Penacook street Manchester, N. H.  
 Sophie H. Kegler, Lowell Normal, '10, 34 Lowden avenue, West Somerville.  
 Edna H. Walcott, Lowell Normal, '10, Nashua, N. H.  
 Hazel Chadwick, Lowell Normal, '11, 141 Nesmith street.  
 Edna M. Hogg, Perry Kindergarten, '12, 505 Westford street.

**SALARIES OF TEACHERS****HIGH SCHOOL**

Head Master .....	\$3000
Men Teachers .....	800 to 2000
Women Teachers, first year .....	650
Women Teachers, second year .....	700
Women Teachers, third year and thereafter .....	800 to 1000

**GRAMMAR SCHOOLS**

Masters, (yearly increase, \$100) .....	\$1300 to \$2000
Teachers, first year, \$500, after ten years .....	800
Teachers of Drawing .....	800
Teachers of Music .....	800 to 1250
Teacher of Sewing .....	900
Assistant Teacher of Sewing .....	700

## SALARIES OF TEACHERS

77

## PRIMARY SCHOOLS

Principals of three or more rooms, maximum salary ..	\$850
Principals of two or more rooms .....	825
Teachers, first year, \$500; after ten years .....	800

## KINDERGARTENS

Principals .....	\$600
Assistants .....	550

## TEMPORARY TEACHERS

Men Teachers per day .....	\$3.00
Women Teachers .....	2.50
Kindergartens .....	1.75
Sub-Master .....	2200

## TEXT BOOKS USED IN THE PUBLIC SCHOOLS

## PRIMARY SCHOOLS

First Readers, Many Series	Davis's Stories of American
Second Readers, Many Series	History
Advanced Second and Third	Carroll's Around the World,
Readers, Many Series	Book I
Franklin Primary Arithmetic	Aldine Reading Chart
Prince's Arithmetic by Grades	American Music Readers
Nicholl's Graded Lessons in	American Music Chart
Number	Blaisdell's Child's Book of
Wilson's Historical Reader	Health
	Whitehouse's Writing Books

## GRAMMAR SCHOOLS

Third Readers, Several Series	Reed's Word Lessons
Fourth Readers, Several Series	The Mother Tongue, Books I
Fifth Readers, Several Series	and II
Scudder's Fables and Folk	Tarr and McMurry's Geogra-
Stories	phies, desk books for teachers
DeFoe's Robinson Crusoe	Frye's Geographies
Burrough's Birds and Bees	Metcalf and Rafter's series of
Hawthorne's Wonder Book	Grammars
American Literature, Master-	Winslow's Earth and its People
pieces	Little People Everywhere Se-
Southworth-Stone Arithmetics	ries of Geographical Readers
Morey's Arithmetics	Gordy's History of the United
Carpenter's Geographical	States
Readers	Scudder's History of the Unit-
Carroll's Around the World	ed States
Lewis's First Manual of	Fiske's History of the United
Composition	States
Union Series of Physiologies	Montgomery's History of the
Coleman's Physiologies	United States
Gulick Hygiene Series	Tappan's Our Country's Story



Wentworth's First Steps in Algebra	Guerber's Story of the English
Worcester's Speller	Guerber's Story of the Greeks
The Morse Speller	Ashley's Citizen and Govern- ment
The Rational Spelling Book	Worcester's, Webster's and Clarendon Dictionaries
Chancellor's Spellers	Werner Mental Arithmetic
Quincy Word List	American Music Readers
Whitehouse's Writing books	

## HIGH SCHOOL

**Chemistry, Physics and Other Sciences**

Experimental Chemistry, Newell	Herbarium Wilson
Qualitative Analysis, Irish	Lessons in Astronomy, Young
A Text-Book of Physics, Hall-Bergen	Physics, Hoadley
Botany, Gray	Physio'ogy, Kellogg
Geology, Le Conte	Physiology, Blaisdell
Descriptive Chemistry, Newell	Physiology, Martin
	Tarr's Physical Geography
	Geology, Brigham

**English**

English Composition, Shaw	Silas Marner, Eliot
Hill's Principles of Rhetoric	Sir Roger de Coverly Papers,
Foundations of Rhetoric, Hill	Addison
Lessons in English, Buehler	Ancient Mariner, Coleridge
Composition Rhetoric, Brooks and Hubbard	Chaucer to Arnold, George
Enlarged Practice Book, Hitchcock	Conciliation with America, Burke
Introduction to English Literature, Pancoast	Ivanhoe, Scott
Story of the Odyssey, Church	Macbeth, Shakespeare
Tales from Shakespeare, Lamb	Lady of the Lake, Scott
Iliad, Pope	Merchant of Venice,
Iliad, Bryant	Shakespeare
	Milton's Lyrics
	Idylls of the King, Tennyson

Julius Ceasar, Shakespeare	Vision of Sir Launfal, Lowell
Emerson's Essays (selected)	Last of the Mohicans, Cooper
Essays of Elia, Lamb	House of Seven Gables,
Twice-Told Tales, Hawthorne	Hawthorne

### French

College Plays, Bocher	Le Tour de la France par
Colomba, Merimee	deux Enfants, Bruno
Le Cid, (Corneille)	La Mare au Diable, Sand
Contes et Legendes, II	La Famille de Germandre,
Guerber	Sand
Douze Contes Nouveaux,	La Fontaine's Fables
Fontaine	(American Book Company)
French Reader for Beginners,	Le Siege de Berlin
Kuhns	Class-Book of French
La Chute, Hugo	Composition, Blouet
French Dictionary, Heath	La Grammaire, Labiche
French Grammar, Grandgent	Scenes de la Revolution
French Grammar, Fraser and	Francaise, Lamartine
Squair	Le Dix-Septieme Siecle
French Grammar, Worman	Grammaire Francaise, Larive
French Lyrics, Bowen	et Fleury, 2me An.
French Reader, Super	French Syntax and Composi-
Exercises, Grandgent, III, IV,	tion, Bouvet
V	Readings from French History,
Exercises for French	Super
Composition, Kimball	Selected Stories, Daudet
La Tache du Petit Pierre	L'Expedition de Bonaparte en
Le Voyage de Monsieur	Egypte, Thiers
Perrichon, Labiche	French Commercial Reader,
French Composition,	Pitman
Grandgent	Intermediate French, Jacques
Sight Reading, Rogers	

**German**

Hoher als die Kirche, Clary	Storm's M. St. Jorgen
German Composition, Fasnacht	German Dictionary, Heath
'Traumereien, Leander	Der Zerbrochne Krug, Joyne's
Heise's L'Arrabbiata	Jayne's Meissner's German
Harris' German Lessons	Grammar
Wesselhoefts' German	Gould's Tales from Hauff
Composition	Schiller's Jungfrau von Orleans
Harris' German Composition	Schiller's Wilhelm Tell
Immensee, Storm's	Wildenbruch's Das Edle Blut
Ludwig's Zwischen, Himmel und Erde	Baumbach's Der Schwiegersohn

**Greek**

Anabasis, Xenophon	Greek Lexicon, Liddell and
Greek Composition, Pearson	Scott
Greek Composition, Woodruff	Greek Lexicon, White
Greek Grammar, Goodwin	Greek Reader, Goodwin
Greek Lessons, White	Homer's Iliad, Seymour
	Homer's Odyssey, Seymour

**History**

Ages of Pericles, Grant	Fiske's School Histories
American History, Montgomery	A Short History of Ancient Times, Myers
Ancient History, Myers	Greek History, Morey
English History, Montgomery	Roman History, Morey
Greek Civilization, Mahaffy	Greek History, Botsford
History of England, Coman and Kendall	Greek Tragedians, Church Johnston's American History
History of English People, Green	Plutarch's Lives, Kaufman Source Book, Hart.
English History, Higginson and Channing	U. S. History, McMaster
European History, Adams	

**Latin**

Caesar, Allen and Greenough	Virgil, Allen and Greenough
Cicero, Allen and Greenough	Virgil, Brice
Gate to Caesar, Collar	Viri Romae, Rolfe
Ovid, Allen and Greenough	First Year Latin, Collar and
Sallust	Daniell

**Mathematics**

Academic Algebra, Wells	Geometry, Plane, Wentworth
Arithmetic, Wentworth and	and Smith
Hill	Elementary Algebra,
Geometry, Plane and Solid,	Wentworth
Wentworth	Geometry, Plane, Wells
Essentials of Algebra, Wells	Secondary Algebra, Wells
	Trigonometry, Wentworth

**Commercial**

Commercial Geography,	Seventy Lessons in Spelling,
Adams	Williams and Rogers
Mental Arithmetic, Williams	Commercial Arithmetic, Moore
and Rogers	Commercial Law, Gano
Business Correspondance,	Bookkeeping and Business
Williams and Rogers	Practice, Williams and
Shorthand, Gregg	Rogers





**SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS OF THE CITY OF LOWELL  
FOR THE YEAR ENDING JUNE 30, 1912.**

SCHOOLS	LOCATION	Whole No. Enrolled			No. pupils belonging Dec. 1912			Whole No. pupils on time books since Sept. 1, 1911			Average No. pupils belonging to school			Average daily attendance			No. ent'd not rec. from any other public school	Rec'd from other public schools of lower grade	Rec'd from other public schools of same grade	Sent to other public schools of higher grade	Sent to other public schools of same grade	Per cent. of attendance	Number of class rooms in regular use	Number of seats or things in these rooms	Number of half days of school, counting each room as a "school"
		Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total												
High . . . . .	Kirk and Anne Sts. . . . .	577	696	1273	567	656	1223	577	696	1273	529	644	1173	504	616	1120	112	312	21	5	96	39	1303	14352	
Bartlett (Gr.) Primaries	Wannalancit St. . . . .	224	244	468	187	204	391	231	250	481	203	214	417	188	197	385	13	85	10	14	92	12	624	4318	
Bartlett. . . . .	Wannalancit St. . . . .	128	117	245	95	97	192	134	121	255	104	105	209	93	91	184	44	6	10	16	88	5	226	1382	
Morrill . . . . .	Adams and Common Sts. . . . .	69	72	141	60	54	114	97	74	171	52	45	97	48	42	90	104	0	23	14	8	93	3	146	1095
Cross St. . . . .	Cross St. near Mt. Vernon St. . . . .	40	43	83	42	46	88	43	45	88	28	38	66	26	37	63	28	8	5	16	5	95	3	133	1104
Totals for Primaries		237	232	469	197	197	394	274	240	514	184	188	372	167	179	337	176	14	38	111	29	91	11	505	3581
Butler (Gr.) Primaries	Gorham St. . . . .	358	342	700	322	321	643	371	350	721	328	313	641	308	290	598	31	161	21	62	23	95	16	797	5840
Agawam St. . . . .	Cor. Agawam and Barrington Sts. . . . .	51	44	95	42	30	72	54	47	101	50	39	89	45	37	82	14	11	6	28	9	93	3	139	1095
Carter St. . . . .	Carter St. . . . .	104	86	190	80	76	156	111	96	207	90	78	168	80	70	150	62	0	17	35	10	89	5	280	1815
London St. . . . .	Cor. London and West Sts. . . . .	67	70	137	69	62	131	75	79	154	65	60	125	59	55	114	46	0	17	0	17	91	3	150	1094
Lyon St. . . . .	Cor. Central and Lyon Sts. . . . .	116	111	227	79	87	166	134	125	259	98	92	196	90	80	180	56	6	32	49	23	90	5	2	1785
Weed St. . . . .	Cor. Gorham and Weed Sts. . . . .	41	59	100	27	27	54	45	65	110	34	49	83	32	45	77	31	0	10	21	11	93	3	161	1095
Totals for Primaries		379	370	749	270	255	525	419	412	831	337	318	655	306	297	603	203	17	82	133	70	92	19	986	6884

# SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS—Continued

Colburn (Gr.)	173	153	326	155	145	300	183	165	348	149	146	295	144	136	280	16	70	22	18	95	9	412	3276	
Primaries																								
Charles St., near Lawrence.....																								
Charles St., near Lawrence.....	85	87	172	89	87	176	103	98	201	72	70	142	67	63	130	11	14	27	32	16	90	4	204	1460
Cor. Ames and Lawrence.....	57	49	106	51	39	90	67	50	117	56	39	95	52	35	87	49	3	11	26	9	92	3	164	1089
Central St. ....	74	73	147	77	68	145	82	78	160	68	68	136	62	62	124	38	11	9	34	14	91	4	210	1460
Totals for Primaries	216	209	425	217	194	411	252	226	478	196	177	373	181	160	341	98	28	47	92	39	91	11	578	4009
Cor. Highland and South Sts.....																								
Edson (Gr.)	254	247	501	237	257	494	260	260	520	229	222	451	211	210	421	23	120	19	20	21	93	11	559	4015
Primaries																								
Charles St.....	103	97	200	78	67	145	111	108	219	74	80	154	73	69	142	68	5	19	29	34	93	4	192	1468
Cor. Cottage and Chapel Sts. ....	67	58	125	54	55	109	69	73	142	58	45	103	53	39	92	37	5	17	34	20	89	3	150	1092
Cor. Summer and Favor Sts. ....	79	89	168	66	56	122	89	98	187	65	66	131	60	61	121	80	0	15	36	19	91	4	220	1452
Totals for Primaries	249	244	493	198	178	376	269	279	548	197	191	388	186	169	355	185	10	51	99	73	91	11	562	4012
Merrimack St. opp. Colburn St.....	313	270	583	209	209	418	335	281	616	230	189	419	217	170	387	269	76	33	23	11	93	11	603	4015
Primaries																								
Cabot St. ....	81	61	142	77	37	114	92	67	159	51	32	83	45	29	74	120	0	14	28	8	90	3	152	1101
Cor. Kirk and Lee Sts. ....	46	46	92	36	31	67	64	54	118	33	31	64	31	28	79	54	2	27	25	20	92	2	111	733
Worthen St. ....	65	63	128	53	55	108	67	67	134	51	47	98	47	43	90	54	0	5	24	10	94	3	159	1098
Totals for Primaries	192	170	362	166	123	289	223	188	411	135	110	245	123	100	223	228	2	46	77	38	91	8	422	2931
Greenhalge (Gr)	195	178	373	162	170	332	202	184	386	167	158	325	157	145	302	94	50	27	17	26	93	9	427	3303
Primaries																								
Greenhalge ....	62	82	144	55	52	107	66	85	151	49	56	105	44	50	94	35	0	12	22	10	89	3	144	1098
Lakeview Ave..	82	84	166	72	66	138	91	89	180	71	72	143	64	64	128	71	1	14	28	15	88	4	214	1460
Totals for Primaries	144	166	310	127	118	245	157	174	331	120	128	248	108	114	222	106	1	26	50	25	89	7	358	2558









SEVENTY - SEVENTH

# ANNUAL REPORT

OF THE

# CITY AUDITOR

RELATING TO THE

## APPROPRIATIONS, RECEIPTS AND PAYMENTS

FOR THE YEAR BEGINNING JANUARY 1, 1912 AND  
ENDING DECEMBER 31, 1912

ALSO

## GENERAL INFORMATION



# CITY OF LOWELL

MASSACHUSETTS

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BUCKLAND PRINTING COMPANY



72 - 74 MIDDLE STREET.      LOWELL

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## Note

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Offices in the City Hall are open from 9 a. m. until 4 p. m.

All accounts against the city should be presented NOT LATER THAN THE FIRST DAY OF EACH MONTH, if presented later they are very liable to go until the following month, before approval.

All accounts rendered should specify what the material and supplies were for, and for which department, and if for labor, where performed and the date.

All accounts should be carefully itemized to avoid delay in payment.

Persons whose accounts against the city have been approved should call promptly for their money, for if not called within thirty days it is returned to the city treasury, as unclaimed.

**Section 1.** That all bills to be paid by the City of Lowell shall first be presented to the Commissioner of that Department contracting the same, on or before the 5th day of each month, for his approval.

**Section 2.** That all bills approved by the Commissioners of the several departments of the city shall present the same to the City Auditor not later than the 8th day of each month, except when such day falls on Sunday, or on a holiday; in such event, such bills may be presented on the next day following such Sunday or holiday.

**Section 3.** That all bills payable by the City shall be paid on the 15th day of each month.

## City of Lowell, Massachusetts

Lowell is situated at the confluence of the Merrimack and Concord Rivers. Was originally a part of Chelmsford.

Incorporated as a Town in 1826.

Incorporated as a City in 1836.

Part of Tewksbury was annexed in 1834, 1874, 1898, 1906.

Part of Dracut was annexed in 1851, 1874, 1879.

Part of Chelmsford was annexed in 1874.

Population 1911, 106,294.

Has 139.79 miles accepted streets, 62.50 miles unaccepted.

Has 109.00 miles of sewers, costing \$6,446,324.23.

Has an area of 14.1 square miles.

Assessed valuation \$84,797,148.90, and 25,194 assessed polls.

Tax rate \$19.40 per \$1,000.00, per cent. of valuation 100.

Bonded Indebtedness \$4,338,576.60, sinking funds \$1,094,927.30.

Net bonded indebtedness, 2,633,909.30.

City Hall and Memorial Building costing \$450,000.

School Department—63 buildings costing \$2,000,000.00, 352 teachers, 14,000 scholars.

Fire Department—14 buildings, 6 engines, 4 hook and ladder trucks, 4 auto combination trucks, 2 chemicals, 12 hose wagons, 150 alarm boxes, 133 miles wire, 190 officers and men.

Police Department—1 station, 1 auto patrol, 2 patrol wagons, 155 officers and men, 68 signal boxes.

Water Department—Daily capacity 14,000,000 gallons; 150 miles mains; 1400 fire hydrants; reservoir capacity 5 days supply; consumes 5,442,967 daily; all water used is from driven well system.

Park Department—142,322 acres of parks and play grounds valued at \$688,272.00.

Has Five National Banks, Two Trust Companies, Capital and Surplus, \$2,186,700.00.

Has Eight Savings Banks, deposits of \$31,259,452.00, over 71,000 depositors.

Has Three Co-operative Banks, 4100 members. Assets \$1,441,700.00.

Has 16½ miles of waterways.

Develops about 30,000 h. p. daily by means of 6½ miles of canals which furnish power for manufacturing plants.

Has the largest cotton mill, largest hosiery, largest leather factory, largest carpet mill, largest mohair mill, largest magneto factory, largest sail-cloth factory and largest proprietary medicine plant in the United States.

Has the greatest Textile School in the world.

Has more than 1000 manufacturing plants.

## Report of the City Auditor

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TO THE HONORABLE, THE MUNICIPAL COUNCIL,

GENTLEMEN:—

I herewith submit the annual report of the City of Lowell, as required by the charter and ordinances for the year beginning January 1, 1912, and ending December 31, 1912, showing the financial transaction of the city. The report shows the distribution of department expenses, but the names and amounts are not shown for the reason that they have been printed each month in the financial report. Included in the book are the reports of the different fund accounts and other general information.

Respectfully submitted,

CHARLES D. PAIGE,

Auditor of Accounts.

Lowell, Mass., April 1, 1913.

## Municipal Council

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MAYOR, JAMES E. O'DONNELL,  
Commissioner of Public Safety.

ALDERMAN, JAMES E. DONNELLY,  
Commissioner of Finance.

ALDERMAN, GEORGE H. BROWN,  
Commissioner of Streets and Highways.

ALDERMAN, ANDREW E. BARRETT,  
Commissioner of Water Works and Fire Pro-  
tection.

ALDERMAN, LAWRENCE CUMMINGS,  
Commissioner of Public Property and Licences.



**SCHEDULE A****BALANCE SHEET OF ASSETS AND LIABILITIES OF  
THE CITY OF LOWELL, DECEMBER 31, 1912****Assets**

Ordinary City Debt Sinking Fund.....	\$	468,963	65
Water Debt Sinking Fund.....		625,963	65
Outstanding Assessments:			
Taxes .....		628,345	65
Sidewalk .....		2,485	11
Sewers .....		826	59
Street Watering.....	{ 1911	3,040	19
	{ 1912	6,636	29
Moth.....	{ 1911	838	10
	{ 1912	1,156	86
Department Bills.....		5,162	86
Cash Balance December 31.....		213,419	66
Total Available Assets .....	\$	1,856,848	61
Valuation of Water Works, both Real Estate and Personal Property.....		1,975,888	67
Valuation of City Buildings, Land, Personal Property .....		4,472,814	45
Total Unavailable Assets.....	\$	6,448,703	12
Total Available Assets .....		1,856,848	61
Total Unavailable Assets .....		6,448,703	12
Grand Total.....	\$	8,305,551	73

**Liabilities**

Ordinary City Debt .....	\$	2,505,036	60
Water Works Debt .....		1,223,800	00
Total Gross City Debt ....	\$	3,728,826	60
Temporary Loan.....		600,000	00
Balance Unexpended.....		123,226	28
Total Liabilities .....		4,452,488	85
Surplus of Assets .....		3,852,488	85
Grand Total.....	\$	8,305,551	73

## CITY AUDITOR'S REPORT

**For the Year Ending December 31, 1912**

Cash Balance .....		\$154,316 45
Receipts to General Treasury.....	\$4,106,193 34	
Temporary Accounts .....	1,236,720 49	
Cash Receipts, omitting duplications.....	\$2,869,874 85	
Payments from General Treasury.....	\$4,047,482 13	
Temporary Accounts.....	1,236,720 49	
Cash Payments, omitting dupltcations.....	\$2,810,761 64	
		59,113 21
		<u>\$213,429 66</u>

## CITY TREASURER'S REPORT

**For the Year Ending December 31, 1912**

Receipts—		
Departments .....	\$ 442,196 45	
Water Works.....	310,393 78	
Loans.....	1,671,700 00	
Tax Account .....	1,645,584 62	
Cash Returned.....	368 33	
Total .....	\$4,070,243 18	
Cash on hand January 1, 1912.....	\$ 154,516 45	
Total Cash.....	\$4,224 559 63	
Total payments to December 31, 1912.....	4,011,129 97	
Cash Balance December 31, 1912 .....	\$ 213,429 66	

## SCHEDULE B

## CITY DEBT, 1912

Total Ordinary City Debt, December 31, 1912.....	\$2,504,776 60
Total Water Works Debt, December 31, 1912 .....	1,223,800 00
Temporary Tax Loan.....	600,000 00
Total Gross Debt, December 31, 1912.....	\$4,328,576 60
Total Ordinary City Debt, January 1, 1912.....	\$2,314,575 80
Loans executed to December 31, 1912.....	471,700 00
Total .....	\$2,786,275 80
Payments to December 31, 1912 .....	281,239 20
Total .....	\$2,505,036 60
Sinking Funds (value).....	468,963 65
Ordinary City Debt, December 31, 1912 .....	\$2,036,072 95
Total Water Works Debt, January 1, 1912.....	1,167,500 00
Loans authorized.....	75,000 00
Total .....	\$1,242,500 00
Payments .....	18,700 00
Total Gross Debt.....	\$1,223,800 00
Sinking Funds (value) .....	625,963 65
Water Works Net Debt, December 31, 1912.....	\$ 597,836 35
City Debt.....	2,036,072 95
Water Works Debt.....	597,836 35
Net Debt, December 31, 1912 .....	<u>\$2,633,909 30</u>

## LIMIT OF INDEBTEDNESS FOR THE YEAR 1913

Total City Debt, January 1, 1913 .....	\$4,328,576 60
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Deduct :	
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Water Loans.....	\$1,223,800 00
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By Legislation.....	800,000 00
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Temporary Tax Loan.....	600,000 00
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	<u>\$2,623,800 00</u>
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City Debt as it relates to the limit of indebtedness .....	\$1,704,776 60
--	----------------

Limit or Municipal Debt for the year 1913 two and one-half per cent. of the average valuation for the past three years.....	2,049,560 87
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City Debt as it relates to the limit of indebtedness.....	<u>1,704,776 60</u>
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Distance from the debt limit, January 1, 1913.....	\$ 344,784 27
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Payments to be made on the City Debt during the year ending December 31, 1913.....	303,215 70
---	------------

Total borrowing limit for the year 1913.....	<u>\$ 647,999 97</u>
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## General Treasury Receipts

Departments:	Total
Buildings .....	\$ 2,615 68
Charity—Hospital .....	5,228 44
Charity—Out Door Relief.....	3,761 06
Cemeteries .....	10,637 89
City Clerk .....	2,008 03
City Sealer .....	608 98
City Weigher.....	47 65
Commissioners .....	3,655 35
Corporation Tax .....	117,882 19
Excise Tax .....	10,098 37
Frie .....	89 00
Health .....	6,758 00
Interest .....	34,426 97
License Commission.....	5,846 00
Liquor Licenses.....	142,851 00
Mayor .....	656 50
Messenger .....	14 32
Military Aid.....	1,752 00
Milk Inspector .....	273 50
Moths.....	3,384 86
National Bank.....	3,700 35
Parks .....	1,073 00
Police.....	6,720 45
Schools .....	13,442 71
Schoolhouses .....	139 88
Sewer Construction.....	8,055 13
Sewer Miscellaneous.....	63 64
Soldiers' Relief.....	1,110 00
State Aid .....	16,851 00
Streets .....	6,147 63
Street Railway Tax .....	11,434 22
Street Watering.....	20,303 38
Treasurer .....	609 18
	<hr/>
	\$ 442,196 45
	<hr/>
Water Works .....	\$ 234,681 81
Water Works Loan.....	75,000 00
Water Works Loan, Premium.....	187 39
Water Works Loan, Interest .....	524 58
	<hr/>
	\$ 310,393 78
	<hr/>

**General Treasury Receipts—Continued**

City Stable Loan .....	\$ 35,000 00
Library Loan .....	4,000 00
Municipal Loan .....	355,600 00
Public Building Loan .....	22,000 00
Road Bonds .....	5,100 00
Sewer Construction Loan .....	50,000 00
Temporary Loan. ....	1,200,000 00
	<hr/>
	\$1,671,700 00

**Tax Account:**

1901 .....	\$ 59 62
1902 .....	111 90
1903 .....	54 04
1904 .....	89 00
1905 .....	22 00
1906 .....	58 70
1907 .....	41 76
1908 .....	283 18
1909 .....	826 39
1910 .....	180,562 47
1911 .....	220,044 95
1912 .....	1,243,430 61
	<hr/>
	\$1,645,584 62

**Cash Returned:**

Charity—Out Door Relief .....	\$ 20 00
Macadamizing Pine St. ....	6 00
Messenger .....	15 00
Paving East Merrimack St. ....	10 97
Paving Gorham St. ....	15 47
Sewer Wages .....	10 14
Street Wages .....	75 01
Fire .....	6 60
Grade Crossings .....	2 55
Lucy Larcum Park .....	1 50
Moths .....	22 14
State Aid .....	53 00
Schools .....	8 55
Sewer Construction .....	2 00



**General Treasury Receipts—Continued**

Soldiers Relief .....	28 00
Paving Church St. ....	75 50
Police .....	40
Macadamizing Streets:.....	14 50
Water Works .....	1 00
	<hr/>
	\$ 368 33
	<hr/>

**Summary**

	Total
Departments .....	\$ 442,196 45
Water Works .....	310,393 78
Loans.....	1,671,700 00
Tax Account.....	1,645,584 62
Cash Returned .....	368 33
	<hr/>
Total .....	\$4,070,243 18
Cash on hand January 1, 1912 .....	154,316 45
	<hr/>
Total Cash.....	\$4,224,559 63
Total Payments to December 31, 1912, per report.....	4,011,129 97
	<hr/>
Cash Balance December 31, 1912 .....	\$ 213,429 66
	<hr/>

## SCHEDULE D

## Receipts and Payments of the Financial Year Classified

	Receipts	Payments
* Operation and Maintenance .....	\$2,323,543 18	\$2,187,979 49
† New Construction .....	346,700 00	423,150 48
Total Cash proceedings for the year .....	\$2,607,243 18	\$2,611,129 97
Cash Fund .....	100,000 00	100,000 00
§ Temporary Accounts .....	1,336,352 16	1,336,352 16
Total proceedings for the year .....	\$4,106,595 34	\$4,047,482 13

\* *Operation and Maintenance* relate only to the General Treasury Fund Revenue and Payments, and do not include receipts and payments on account of loans or permanent construction.

† *Construction* relates only to General Treasury Fund Loans receipts and payments, and for permanent construction.

§ *Temporary Accounts* are simply Journal items (duplications), receipts and payments which are temporarily held and paid out again, and show the same amounts in both receipts and payments.

## TEMPORARY ACCOUNTS

	Receipts	Payments
Temporary Tax Loans .....	\$1,200,000 00	\$1,300,000 00
General Treasury Fund Transfers .....	36,352 16	36,352 16
Rebates and Refunds .....	1,781 63	1,781 63

## RECEIPTS AND PAYMENTS FOR THE CURRENT YEAR

## Revenue Receipts and Payments—Non-Revenue Receipts and Payments Grouped According to Functions Showing the Actual Receipts and Payments of Each Department.

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expense	Non Revenue
1 Departmental.	15,245 77		121,203 64	
2 Protection of Life & Prop- erty .....	20,041 55		374,711 24	15,859 07
3 Health and Sanitation....	17,016 13		90,405 20	96,823 67
4 Highways and Bridges.....	27,858 48		248,046 02	124,136 97
5 Charities .....	19,493 76		96,572 52	
6 Soldiers' Ben- efits.....	19,794 00		39,365 05	
7 Education....	14,327 08		467,671 62	
8 Recreation....	1,205 50		18,174 52	
9 Unclassified ..				5,091 57
10 Public Service Enterprises..	235,442 43		321,768 16	
11 Cemateries ...	10,672 89		8,029 85	
12 Interest, In- debtedness, Sinking Funds.....	34,426 97	1,746,700 00	177,312 25	1,581,239 20
13 Taxes, Licens- es, Permits...	1,944,370 78		260,866 46	
14 Refunds.....			205 12	
	2,359,895 34	17,467 00	2,224,331 65	1,823,150 48

## 1. DEPARTMENTAL

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Commissioners .....	1,967 69		14,131 06	
Mayor .....	50		4,682 81	
Auditor.....			5,993 93	
Treasurer.. ..	1,009 18		11,927 23	
Assessors.....			14,262 55	
City Clerk.....	260 00		7,300 22	
Messenger.....	29 32		17,481 70	
Law.....	2 55		5,008 97	
Elections.....	3,800 00		10,691 76	
Registrars .....	800 00		4,866 99	
State Supervisors .....				
Engineer.....	7,376 53		13,848 68	
Supply .....			6,539 96	
Insurance .....			4,467 78	
	15,245 77		121,203 64	

## 2. PROTECTION OF LIFE AND PROPERTY

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Police Department:				
Commissioners.....			3,988 06	
Salaries-Wages .....	1,703 65		140,944 09	
Horses and Care. ....			376 01	
Fuel-Light.....			1,168 50	
Equipment and Repairs..			275 75	
Auto and Repairs .....			1,117 81	
Pensions.....			7,225 27	
Police Court Fines.....	5,982 41			
Sale of Material. ....	21 39			
Rent of Court Room.....	2,400 00			
Miscellaneous Expenses..	62 00		2,365 69	
Police—Underground Wires.....			167 03	
Fire Department:				
Salaries-Wages .....	6 60		150,088 49	
Horses and Care.....	661 52		1,546 38	
Fuel-Light.....			5,633 83	
Hydrant Service... ..			579 91	
Equipment and Repairs..			862 50	
Auto-Repairs .....			3,458 27	
Pensions. ....			2,091 25	
New Buildings.....	796 41			13,598 98
Sale of Material.....	39 00			
Miscellaneous Expenses..			10,112 50	
Rifle Range.....			1,125 37	2260 09
Inspector of Buildings .....	3,252 59		25,977 40	
Inspector of Wires.....			2,521 98	
Sealer.....	608 98		2,314 87	
Moth and Beetle.....	4,507 00		9,488 48	
Care of Trees .....			800 00	
Fish Warden.....			96 30	
Pound Keeper.....			5 00	
Smoke Inspector .....			380 50	
	20,041 54		374,711 24	15,859 07

## 3. HEALTH AND SANITATION

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Health :			10,636 23	
Administration .....			6,551 62	
Other Expences .....				
Contagious Diseases .....	292 56		2,536 72	
Milk and Vinegar .....	273 50		500 00	
Animals and Provisions ..				
Sanitation :				
Sewer Maintenance .....				
Sewer Construction .....	8,130 91		18,000 00	
Refuse and Garbage .....				68,198 19
Sale and Use of Material.	8,108 54		51,380 63	
Miscellaneous .....	70 35			
Reimbursements .....	140 27			
City Hospital (Contagious Fund) .....				
School Inspection .....			800 00	
Erection of City Stables.				23,024 55
Comfort Station .....				5,600 93
	17,016 13		90,405 20	96,823 67



## 4. HIGHWAYS AND BRIDGES

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Street Department: <del>21 22</del>				
Administration .....			4,718 27	
Yard Maintenance.....			17,328 25	
Construction Streets.....			27,659 34	
Repairing Streets.....			1,5372 09	
New Paving.....				83,779 60
Macadamizing. ....				23,962 19
Cleaning Streets .....			43,028 40	5,971 80
Watering Streets.....	20,303 38		19,000 00	
Sidewalks and Curbing...	5,579 93		556 06	
Snow Removal.....			9,052 52	
Bridge Repairs, etc.....				10,423 38
Sale and Use of Material.	496 03			
Miscellaneous.....	15 42		26,216 09	
Other Expenses.....	1,463 72		85,000 00	
Street Lighting.....			115 00	
State Highway Tax.....				
	27,878 48		248,046 02	124,136 97

## 5. CHARITIES

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Out Door Relief:				
Salaries—Wages.....	20 00		6,338 75	
Ambulance. ....			3,355 80	
Supplies and Medicine...	1,788 53		24,812 73	
Hospital Maintenance.....			59,781 99	
Hospital Improvements...			52 20	
Contagious Hospital.....			2,231 05	
Reimbursements:				
Alms-house.....	1,663 54			
From Cities and Towns..	2,747 67			
From State.....	1,909 95			
From Other Sources.....	11,364 07			
	19,493 76		96,572 52	

## 6. SOLDIERS' BENEFITS

Administration.....	45 00		2,073 73	
State Aid.....	16,851 00		16,059 00	
Military Aid .....	1,752 00		3,132 00	
Soldiers' Relief.....	1,146 00		17,344 32	
			756 00	
	19,794 00		39,365 05	

## 7. EDUCATION

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Administration .....			3,075 00	
Salaries. ....	8 55		6,718 91	
Other Expenses .....	875 82		18,602 38	
Teachers :				
Day School.....			245,515 62	
Evening School.....			15,076 25	
Kindergartens.....			12,106 53	
Manual Training.....			3,400 00	
Text Books, etc.....			6,908 65	
Janitor Service.....			53,868 11	
Fuel and Light.....			25,413 23	
Board of Truants .....			3,873 54	
Furniture and Furnishings				
Repairs and Improve-				
ments .....			20,188 05	
New Buildings-Additions				
Reimbursements.....	530 21			
Tuition. ....	12,913 50			
Textile School.....			8,000 00	
Industrial School .....			26,425 35	
Library and Reading				
Rooms				
Salaries.....			11,262 46	
Books, etc.....			1,070 20	
Lighting .....			921 64	
Binding. ....			761 91	
Miscellaneous.....			483 79	
Construction.....			4,000 00	
	14,327 08		467,671 62	

## 8. RECREATION

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Supervision .....				
Parks and Gardens :				
Wages .....	1 50		9,001 50	
Improvements and Additions .....				
Other Expenses.....	131 00		5,222 91	
Rentals .....	1,073 00			
Playgrounds.....			1,000 00	
Celebrations :				
Memorial Day.....			1,350 00	
Band Concerts.....			686 55	
Fourth of July.....			913 56	
Baltimore March .....				
Labor Day.....				
Columbus Day .....				
	1,205 50		18,174 52	

## 9. UNCLASSIFIED

Rebuilding State Road.				5,091 57
				5,091 57

## 10. PUBLIC SERVICE ENTERPRISES

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Water Works:				
Maintenance—Operation .			96,372 12	
New Construction.....			141,897 06	
New Pump.....				
Bonds and Notes Paid from Earnings.....			18,700 00	
Interest on Loans.....	841 18		46,936 88	
Other Expenses.....	3 20		15,085 18	
Income Sale of Water....	234,074 40			
Miscellaneous.....	476 00		1,967 67	
Public Scales.....	47 65		809 25	
	235,442 43		321,768 16	

## 11. CEMETERIES

Supervision:				
Wages.....	35 00		5,868 31	
Other Expenses.....	5 00		2,161 54	
Sale of Lots.....	2,851 00			
Care of Lots.....	5,576 89			
Interments and Founda- tions.....	2,205 00			
Income—Perpetual Care.				
	10,672 89		8,029 85	

## 12. INTEREST-INDEBTEDNESS - SINKING FUNDS

	Receipts		Payments	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Interest:			33,125 13	
Temporary Tax Loans...			111,687 12	
Loans, General Purposes				
Trust Funds.....				
Perpetual Care.....				
From Taxes.....	24,421 78			
From Bank Deposits.....	10,005 19			
Indebtedness:				
Temporary Tax Loans ..		1,200,000 00		1,300,000 00
Highways .....		108,700 00		50,840 00
Schools .....		35,000 00		13,960 00
Sewers .....		50,000 00		33,500 00
Water .....		75,000 00		
Buildings.....		45,000 00		18,430 00
Other .....		233,000 00		164,519 00
Sinking Funds:.....				
Gen. Tax Levy Buildings			14,500 00	
Gen. Tax Levy-Water				
Works.....			16,000 00	
High Service .....				
	34,426 97	1,746,700 00	177,312 25	1,581,239 20



## 13. TAXES - LICENSES - PERMITS

	Receipts		Payment	
	Revenue For Expense	Non Revenue	Expenses	Non Revenue
Taxes:				
Current Year .....	1,243,430 61			
Previous Years .....	402,154 01			
Street Railroad:				
State .....	10,098 37			
City .....	11,434 22			
All Other:				
Corporation .....	117,882 19		1,313 05	
National Bank .....	3,700 35		11,147 31	
State .....			137,187 50	
County .....			75 505 60	
Licenses:				
Liquor .....	142,800 00		35,713 00	
Druggist .....	51 00			
Fish .....				
Auctioneers .....	64 00			
Dog .....	3,655 35			
Business .....	5,158 27			
Junk .....	258 25			
Others .....	658 66			
Permits:				
Amusements .....	1,331 50			
Marriage .....	1,113 00			
Pool and Bowling .....	581 00			
	1,944,370 78		260,866 46	

## 14. REFUNDS

Taxes after Payment .....			205 12	
Moth and Beetle .....				
Tax Titles .....				
Street Watering .....				
			205 12	



# AUDITOR'S STATEMENT

OF THE

## FINANCIAL CONDITION OF THE CITY OF LOWELL, MASS.

BALANCES, APPROPRIATIONS, TRANSFERS, CASH RECEIPTS,  
EXPENDITURES AND UNEXPENDED BALANCES FOR THE  
TWELVE MONTHS ENDING DECEMBER 31, 1912,  
ALLOWED BY THE MUNICIPAL COUNCIL.

Cash Balance January 1, 1913.....		154,816 45
Receipts to General Treasury.....	4,106,593 34	
Temporary Accounts.....	1,236,720 49	
	<hr/>	
Cash Receipts omitting duplications.		2,869,874 85
Payments from General Treasury...	4,047,482 13	
Temporary Accounts.....	1,236,720 49	
	<hr/>	
Cash Payments omitting duplications .....		2,810,761 64
		<hr/>
		59,113 21
		<hr/>
Cash Balance December 31, 1913..		213,429 66
		<hr/>

# APPROPRIATIONS, RECEIPTS AND PAYMENTS

Expenditure	1912 Balances	From 1911	Appropriated from Revenue	Appropriated from Loans	Transfers	Cash Receipts	Total Appropriation
<b>1—Commissioner of Public Safety.</b>							
<b>Accounts—</b>							
Mayor, S.....		4,200 00	4,200 00				4,200 00
Mayor, O. E.....	*	482 81	700 00				700 00
Charity, O. D. R., S.....	*	6,338 75	6,640 00				6,640 00
Charity, O. D. R., S.....		28,168 53	26,360 00		1,788 53	20 00	28,168 53
Charity, Hospital, S.....		12,264 25	12,174 50		89 75		12,264 25
Charity, Hospital, O. E.....	*	47,517 74	39,042 42		9,092 30		48,134 72
Fish Warden.....	*	96 30	100 00				100 00
Health Office, S.....		15,626 23	10,576 00				10,636 23
Health Office, O. E..	*	6,551 62	6,552 35		60 23		5,552 35
Health Yard, W.....		40,574 31	39,324 59		1,249 72		40,574 31
Health Yard, O. E.....	*	10,806 32	11,214 40		1,853 63		13,068 03
Milk Inspector, S.....		2,206 50	2,202 00		4 50		2,206 50
Milk Inspector, O. E.....	*	330 22	330 66				330 66
Law, S.....	*	4,358 91	4,376 00				4,376 00
Law, O. E.....	*	650 06	874 00			2 55	994 31
Pound Keeper.....		5 00	5 00				5 00
Police, S.....	*	140,944 00	139,287 75		1,703 25		140,991 00
Police, Pensions.....	*	7,225 27	8,289 00				8,289 00
Police, O. E.....	*	5,303 76	5,423 25			40	5,423 65
School Inspection.....		800 00	800 00				800 00
State Aid Office .....	*	2,073 73	2,100 00				2,100 00

State Aid.....	16,059 00	*	486 50		16,500 00	45 00	16,545 00
Military Aid.....	3,132 00	*	68 00		3,200 00		3,200 00
Soldiers' Relief.....	18,100 32	*	135 68		18,200 00	36 00	18,236 00
Inspector of Animals.....	500 00	*	10 00		510 00		510 00
Police—Wires .....	167 03	*	103 48	270 51			270 51
Contagious Hospital Comm....		*	951 07	951 07			951 07
Insurance .....	4,467 78	*	32 22		4,500 00		4,500 00
Erection of City Stable .....	23,024 55	†	11,975 45		35,000 00		35,000 00
Comfort Station.....	5,600 93	†	16 399 07		22,000 00		22,000 00
Contagious Hospital.....	2,231 05	†	4,768 95		7,000 00		7,000 00
Total.....	404,817 06		39,950 06	1,339 34	363,481 92	15,841 91	444,767 12

## 2—Commissioner of Finance.

Accounts—							
Auditor, S.....	4,100 00				4,100 00		4,100 00
Auditor, O. E.....	1,893 93	*	6 07		1,900 00		1,900 00
Assessors, S.....	13,030 35	*	39 65		13,070 00		13,070 00
Assessors, O. E.....	1,232 20	*	197 80		1,730 00		1,430 00
Treasurer, S.....	9,152 00	*	10 00		9,112 00	50 00	9,162 00
Treasurer, O. E.....	2,775 23				2,388 00	387 23	2,775 23
City Clerk, S.....	5,842 00	*	225 67		6,017 67	50 00	6,067 67
City Clerk, O. E.....	1,458 22	*	34 11		1,282 33	210 00	1,492 33
Elections, S.....	7,342 80				3,240 00	4,102 80	7,342 80
Elections, O. E.....	3,348 96	*	211 04		3,560 00		3,560 00

# APPROPRIATIONS, RECEIPTS AND PAYMENTS—Continued

	Expenditure	1912 Balances	From 1911	Appropriated from Revenue	Appropriated from Loans	Transfers	Cash Receipts	Total Appropriation
<b>Commissioner of Finance—Continued</b>								
Registrars, S .....	3,716 34			2,700 00		1,016 32		3,716 32
Registrars, O. E..... *	1,150 67	149 33		1,300 00				1,300 00
Supply, S.....	5,254 00			5,251 50		2 50		5,254 00
Supply, O. E..... *	1,285 96	102 54		1,388 50				1,388 50
Interest.....	146,812 25			140,000 00		6,812 25		146,812 25
Sinking Funds .....	30 500 00			30,500 00				30,500 00
City Debt.....	281,239 20			278,799 29		2,440 00		281,239 20
Temporary Loans.....	1,300,000 00 †	600,000 00	700,000 00		1,200,000 00			1,900,000 00
Refund of Taxes.....	205 12					205 12		205 12
National Bank Tax.....	11,147 31 *	68		17,147 99				11,147 99
Corporation Tax.....	1,313 05					1,312 05		1,312 05
County Tax.....	75,505 60			75,505 60				75,505 60
State Tax.....	137,187 50			137,187 50				137,187 50
State Highway Tax.....	115 00			115 00				115 00
Total.....	2,045,607 67	600,976 89	700,000 00	729,995 59	1,200 000 00	16,589 27		2,646,584 56



### 3—Commissioner of Streets and Highways

Accounts—					
Streets, S. & W.....	115,065 44	*	50 75	115,000 00	55 38
Streets, O. E.....	26,216 09			25,000 00	1,213 89
Street Watering, S. & W.....	5,000 00			5,000 00	
Street Watering, O. E.....	14,000 00			14,000 00	
Street Lighting.....	85,000 00			85,000 00	
Sewer Maintenance, S. & W..	14,000 00			14,000 00	
Sewer Maintenance, O. E.....	4,000 00			4,000 00	
Sewer Construction.....	68,198 19			50,000 00	245 39
Engineering, S. & W. ....	13,512 38			6,100 00	7,412 38
Engineering, O. E.....	336 30	*	63 70	400 00	
Congress and Billerica Street		{	245 39		
Bridges .....	50 76	†	1,542 62		
Lawrence Street Bridge.....		†	464 14		
Shaw Street Extension .....		†	989 84		
Paving Gorham & other Streets	8,243 13		8,227 66		
Macadamizing Streets.....	5,591 69		5,591 69		15 47
Painting and Repairing Bridges	3,872 62		3,872 62		
Stromquist Avenue.....	2,649 49		2,649 49		
Paving East Merrimack Street					
to Fayette Street .....	2,700 00		2,700 00		
Macadamizing Streets, 1912..	18,370 50			18,350 00	20 50
Paving Streets, 1912.....	72,836 47			72,750 00	86 47
Market Street Bridge.....	6,500 00			6,500 00	
Cleaning Streets.....	5,971 80		28 20	6,000 00	
Total....	472,114 86		3,393 64	268,500 00	8,924 04
			44,274 87	153,600 00	209 59
					475,508 50

# APPROPRIATIONS, RECEIPTS AND PAYMENTS—Continued

	1912 Balances	From 1911	Appropriated from Revenue	Appropriated from Loans	Transfers	Cash Receipts	Total Appropriation
<b>4—Commissioner of Water Works and Fire Protection</b>							
Accounts—							
Water Works .....	193,737 08	† 41,057 70				235,394 78	235,394 78
New Wells, Reservoir .....	127,221 83	† 24,559 18		75,000 00			151,781 01
Fire, S. & W. ....	152,179 74	† 12,805 82	164,985 56				164,985 56
Fire, O. E. ....	22,193 39	† 5,244 17	26,769 44		661 52	6 60	27,437 56
Total .....	495,332 04	84,266 87	191,755 00	75,000 00	661 52	235,401 38	579,598 91

## 5—Commissioner of Public Property and Licenses

Accounts—							
Building Inspection, S. & W. .	15,917 66		14,000 00		1,917 66		15,917 66
Building Inspection, O. E. ....	10,059 74		7,000 00		2,559 74		10,059 74
Cemeteries, S. & W. .... *	5,868 31	492 69	6,326 00		35 00		6,361 00
Cemeteries, O. E. ....	2,161 54		1,674 00		487 54		2,161 54
Liquor Licenses .....	35,713 00	187 00	35,900 00				35,900 00
Messenger, S. & W. .... *	10,906 96	194 04	11,086 00		15 00		11,101 00
Messenger, O. E. ....	6,574 74	339 26	6,914 00				4,914 00
Moth and Beetle, S. & W. .... *	7,889 32	132 82	8,000 00		22 14		8,022 14
Moth and Beetle, O. E. .... *	1,599 16	84	500 00		1,100 00		1,600 00

Smoke Inspection, S.....	300 00				300 00		300 00
Smoke Inspection, O. E.....	80 50	*	19 50		100 00		100 00
Rifle Range, S.....	628 00				628 00		628 00
Rifle Range, O. E.....	497 37	*	6 11	131 48	372 00		503 48
Sealer, S.....	1,985 00				1,980 00	5 00	1,985 00
Sealer, O. E.....	329 87				320 00	9 87	329 87
Weigher, S.....	800 00				800 00		800 00
Weigher, O. E.....	9 25	*	75		10 00		10 00
Inspector of Wires, S.....	2,228 00				2,226 00	2 00	2,228 00
Inspector of Wires, O. E....	293 98	*	6 02		300 00		300 00
Parks, S. & W. ....	9,001 50				9,000 00		9,001 50
Parks, O. E. ....	3,131 00				3,000 00	131 00	3,131 00
Care of Trees.....	800 00				800 00		800 00
Shedd Park.....	2,091 91	*	16	2,092 07			3,092 07
Playgrounds.....	1,000 00				1,000 00		1,000 00
Schoolhouses, S. & W.....	11,735 22	*	791 48		12,000 00	526 70	12,526 70
Schoolhouses, O. E.....	8,452 83	*	756 41		9,000 00	209 24	9,209 24
Huntington Hall, Commissioners' Fund.....		*	267 75	267 65			267 65
Race Street Fire House.....	5,833 07			5,833 07			5,833 07
Fire House Improvements ...	7,765 91	†	639 05	608 55	7,000 00	796 41	8,404 96
License Commissioners, S....	3,800 00				3,800 00		3,800 00
License Commissioners, O. E..	188 06	*	11 94		200,00		200 00
Rifle Range Imp., 1912 .....	2,260 09	†	739 91		3,000 00		3,000 00
City Hospital Repairs .....	52 20	†	1,240 38	1,292 58			1,292 58
Total.....	159,954 19		5,826 01	10,725 40	137,236 00	7,802 30	165,780 20
						38 64	

# APPROPRIATIONS, RECEIPTS AND PAYMENTS—Continued

	Expenditure	1912 Balances	From 1911	Appropriated from Revenue	Appropriated from Loans	Transfers	Cash Receipts	Total Appropriation
<b>6—Unclassified</b>								
<b>Accounts—</b>								
Carney Medal Fund.....	†	200 00	200 00					200 00
Rebuilding State Road, Dracut	5,091 57 *	8 43			5,100 00			5,100 00
	5,091 57	208 43	200 00		5,100 00			5,300 00
<b>7—Education</b>								
<b>Accounts—</b>								
Schools .....	420,983 57			385,000 00	35,000 00	975 02	8 55	420,983 57
Library and Reading Room ..	18,500 00			14,500 00	4,000 00			18,500 00
Textile School.....	8,000 00 *	1,000 00		9,000 00				9,000 00
Total .....	447,483 57	1,000 00		408,500 00	39,000 00	975 02	8 55	448,483 57
<b>8—Municipal Council</b>								
<b>Accounts—</b>								
Commissioners, S. ....	10,000 00			10,000 00				10,000 00
Commissioners, Incidental Fund.....	4,131 06			4,064 00		67 06		4,131 06
Memorial Day, G. A. R.....	1,000 00			1,000 00				1,000 00
Memorial Day, S. W. V.....	350 00			350 00				350 00
Band Concerts.....	686 55 *	13 45		700 00				700 00
July Fourth Cel. ....	913 56			913 56				913 56
Total .....	17,081 17	13 45		17,027 56		67 06		17,094 62

# RECAPITULATION OF SCHEDULES

Commissioner of Public Safety	404,817 06	39,950 06	1,339 34	363,481 92	64,000 00	15,841 91	103 95	444,767 12
Commissioner of Finance.....	2,045,607 67	600,976 89	700,000 00	729,995 29	1,200,000 00	16,589 27		2,646,584 56
Commissioner of Streets and Highways.....	472,114 86	3,393 64	44,274 87	268,500 00	153,600 00	8,924 04	209 59	475,508 50
Commissioner of Water Works and Fire .....	495,332 04	84,266 87	76,781 01	191,755 00	75,000 00	661 52	235,401 38	579,598 91
Commissioner of Property and Licenses.....	150,954 19	5,826 01	10,725 40	137,236 00	10,000 00	7,802 30	38 64	165,780 20
Unclassified.....	5,091 57	208 43	200 00		5,100 00			5,300 00
Education .....	447,483 57	1,000 00		408,500 00	39,000 00	975 02	8 55	448,483 57
Municipal Council.....	17,081 17	13 00		17,027 56		67 06		17,094 62
Grand Total .....	4,047,482 13	735,635 35	833,320 62	2,116,495 77	1,546,700 00	50,838 98	235,762 11	4,783,117 48

\* Returned to G. T. Fund... 12,409 07  
† Balance to 1913..... 725,286 28

735,635 35

\* 16,454 51  
† 34,384 47

50,838 98

**MAYOR'S DEPARTMENT****Salaries**

Appropriation.....	\$ 4,200 00	
	<u>          </u>	\$ 4,200 00

**Expended**

James E. O'Donnell, Mayor.....	\$ 3,000 00	
James Hearn, Secretary.....	1,200 00	
	<u>          </u>	\$ 4,200 00

**Other Expenses**

Appropriation..	\$ 700 00	
	<u>          </u>	\$ 700 00

**Expended**

For Stationery and Printing .....	\$ 192 10	
Telephone, Transportation, etc.....	228 69	
Sundries .....	62 02	
	<u>          </u>	\$ 482 81
Returned to General Treasury Fund.....		217 19

**CHARITY DEPARTMENT****Out Door Relief****Salaries and Wages**

Appropriation.....	\$ 6,640 00	
	<u>          </u>	\$ 6,640 00

**Expended**

Martin Conley .....	\$ 21 50	
Michael J. Dowd.....	1,197 58	
	<u>          </u>	\$ 1,210 08



## For Clerk Hire and Wages:

To Sundry Persons.....	\$ 5,119 67	
	<hr/>	\$ 5,119 67
		<hr/>
		\$ 6,338 75
Returned to General Treasury Fnnd.....		\$ 301 25
		<hr/>
		\$ 6,640 00
		<hr/>

## Other Expenses

Appropriation .....	\$ 28,168 53	
	<hr/>	\$ 28,168 53

## Expended

## For Cash Allowances:

To Sundry Persons .....	\$ 2,284 64	
	<hr/>	\$ 2,284 64
For Commonwealth of Massachusetts .....	\$ 544 77	
Dispensary Supplies.....	1,925 86	
Hospitals and Institutions .....	5,661 71	
Interments .....	235 00	
Office Supplies and Transportation .....	207 53	
Physicians .....	1,225 00	
Support Almshouse-Cities.....	2,720 01	
Support Almshouse-Towns.....	742 18	
Sundries .....	7,076 76	
Wood Yard, Fuel ...	1,942 69	
Wood Yard, Sundries .....	236 58	
Ambulance, Service and Surgeons.....	3,100 00	
Ambulance, Sundries .....	255 80	
	<hr/>	25,883 89
		<hr/>
		\$ 28,168 53
		<hr/>

## AUDITOR'S REPORT

## LOWELL CITY HOSPITAL AND ALMSHOUSE

## Salaries and Wages

Appropriation.....	\$ 12,264 25	
	<u>          </u>	\$ 12,264 25

## Expended

For Wages :

To Sundry Persons .....	\$ 12,264 25	
	<u>          </u>	\$ 12,264 25

## Other Expenses

Appropriation.....	\$ 48,134 72	
	<u>          </u>	\$ 48,134 72

## Expended

For Carriages, Harnesses and Repairs.....	\$ 188 58	
City Physician's Salary.....	700 00	
Clothing .....	3,238 12	
Drugs, Medicines, etc.....	789 61	
Express and Transportation .....	14 53	
Fuel.....	5,184 79	
Grains, Groceries and Provisions.....	28,940 09	
Hardware, Fittings, etc.,.....	217 04	
Painters' and Electricians' Supplies.....	136 88	
Shoeing Horses.....	189 05	
Stationery, Printing, etc.....	64 75	
Sundries.....	4,840 16	
Water, Lighting and Telephone.....	3,014 14	
	<u>          </u>	\$ 47,517 74
Balance returned to General Treasury Fund....		616 98
		<u>          </u>
		\$ 48,134 72

**CONTAGIOUS HOSPITAL**

Appropriation.....	\$	7,000 00	
		<u>          </u>	\$ 7,000 00

**Expended**

For Express, Transportation, etc.....	\$	27 95	
Hospitals and Institutions .....		1,197 03	
Physicians .....		186 00	
Provisions .....		101 15	
Sundries.....		303 16	
Support.....		239 76	
Wages.....		176 00	
		<u>          </u>	\$ 2,231 05
Balance to 1913 .....			4,768 95
			<u>          </u>
			\$ 7,000 00

**FISH WARDEN**

Appropriation.....	\$	100 00	
		<u>          </u>	\$ 100 00

**Expended**

To James Keefe.....	\$	1 19	
Harry Gonzales .....		95 11	
		<u>          </u>	\$ 96 30
Returned to General Treasury Fund .....			3 70
			<u>          </u>
			\$ 100 00

**HEALTH OFFICE****Salaries and Wages**

Appropriation.....	\$	10,636 23	
		<u>          </u>	\$ 10,636 23

**Expenditures**

## For Board of Health:

P. Brunelle.....	\$	500 00	
Thos. F. Carroll.....		458 33	
D. J. Murphy .....		41 67	
J. A. Osgood.....		500 00	
		<hr/>	\$ 1,500 00
To Fred A. Bates, Agent .....	\$	1,820 00	
Thomas B. Smith, Bacteriologist.....		600 00	
		<hr/>	\$ 2,420 00

## For Clerk Hire and Wages:

To Sundry Persons.....	\$	6,716 23	
		<hr/>	\$ 6,716 23
			<hr/>
	\$		10,636 23

**Other Expenses**

Appropriation.....	\$	6,552 35	
		<hr/>	\$ 6,552 35

**Expended**

For Care of Patients in Hospital, etc.....	\$	3,934 64	
Express and Transportation.....		101 54	
Laboratory Supplies.....		129 61	
Professional Service .....		761 40	
Stationery, Printing, etc.....		452 45	
Sundries .....		1,171 98	
		<hr/>	\$ 6,551 62
Returned to General Treasury Fund.....			73
			<hr/>
	\$		6,552 35

**HEALTH YARD****Wages**

Appropriation.....	\$	40,574 31	
		<hr/>	\$ 40,574 31

**Expended**

For Wages:

To Sundry Persons.....	\$ 40,574 31	
	<u>          </u>	\$ 40,574 31

**Other Expenses**

Appropriation.....	\$ 13,068 03	
	<u>          </u>	\$ 13,068 03

**Expended**

For Carriages, Harnesses and Repairs.....	\$ 461 34	
Fuel, Cement, etc.....	485 00	
Hardware, Fittings, etc.....	439 53	
Horses, Use of Horses.....	6,900 29	
Paints, Oils, etc.....	31 70	
Sundries .....	1,803 92	
Water and Lighting .....	171 54	
	<u>          </u>	\$ 10,806 32
Returned to General Treasury Fund.....		2,261 71
		<u>          </u>
		\$ 12,068 03

**MILK INSPECTOR****Salaries and Wages**

Appropriation.....	\$ 2,206 50	
	<u>          </u>	\$ 2,206 50

**Expended**

To Melvin F. Master .....	\$ 1,500 00	
James E. Hill.....	706 50	
	<u>          </u>	\$ 2,206 50

**Other Expenses**

Appropriation.....	\$ 330 66	
	<u>          </u>	\$ 330 66

## AUDITOR'S REPORT

**Expended**

For Laboratory Supplies .....	\$	145 37	
Stationery, Printing, etc.....		04 60	
Sundries .....		120 25	
		<hr/>	\$ 330 22
Returned to General Treasury Fund.....			44
			<hr/>
	\$		330 66
			<hr/>

**LAW****Salaries and Wages**

Appropriation.....	\$	4,376 00	
		<hr/>	\$ 4,376 00
			<hr/>

**Expended**

To W. W. Duncan, City Solicitor.....	\$	24 19	
J. J. Hennessy, City Solicitor .....		2,506 72	
M. E. McDonald, Claim Agent.....		1,200 00	
		<hr/>	\$ 3,730 30
			<hr/>
For Clerk Hire.....	\$	628 00	
		<hr/>	628 00
			<hr/>
	\$		4,359 91
Returned to General Treasury Fund.....			17 09
			<hr/>
	\$		4,376 00
			<hr/>

**Other Expenses**

Appropriation.....	\$	994 31	
		<hr/>	\$ 994 31
			<hr/>

**Expended**

For Stationery, Printing, etc.....	\$	269 73	
Sundries .....		366 39	
Telephone, Express, etc.....		13 04	
		<hr/>	\$ 650 06
Returned to General Treasury Fund.....			344 25
			<hr/>
	\$		994 34
			<hr/>



**POUND KEEPER**

Appropriation.....	\$	5 00	
		<u>          </u>	\$ 5 00

**Expended**

To O. W. Peabody.....	\$	5 00	
		<u>          </u>	\$ 5 00

**POLICE DEPARTMENT****Salaries and Wages**

Appropriation.....	\$	140,991 00	
		<u>          </u>	\$ 140,991 00

**Expended****Board of Police:**

Thomas P. Boulger ..	\$	750 00	
Charles H. Hanson.....		750 00	
John J. Mullaney.....		800 00	
		<u>          </u>	\$ 2,300 00

**Secretary:**

John J. Flaherty, Jr.....	\$	1,500 00	
		<u>          </u>	1,500 00

**Commissioned Officers:**

Redmond Welch, Supt.....	\$	2,000 00	
Hugh Downey .....		1,500 00	
T. R. Atkinson.....		1,500 00	
James Brosnan.....		1,500 00	
		<u>          </u>	6,500 00

To Sundry Persons .....			130,344 00
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			140,944 00
Returned to General Treasury Fund.....			46 91
			<u>          </u>
	\$		140,991 00

**Other Expenses**

Appropriation.....	\$	5,423 65	
		<u>\$</u>	<u>5,423 65</u>

**Expended**

For Automobile Repairs and Fittings ..	\$	1,117 81	
Carriages, Harnesses and Repairs.....		275 75	
Cloth, Insignia, etc.,...		56 97	
Fuel.....		627 54	
Hardware.....		76 33	
Hay, Grain, etc.....		309 96	
Shoeing Horses.....		66 05	
Stationery, Printing, etc.....		473 92	
Sundries .....		1,572 84	
Transportation, Carriage Hire, etc.'.....		70 62	
Water, Lighting and Telephone.....		655 97	
		<u>\$</u>	<u>5,303 76</u>
Returned to General Treasury Fund.....			119 89
		<u>\$</u>	<u>5,423 65</u>

**Pensions**

Appropriation ....	\$	8,289 00	
		<u>\$</u>	<u>8,289 00</u>

**Expended**

To Sundry Persons.....	\$	7,225 27	
		<u>\$</u>	<u>7,225 27</u>
Returned to General Treasury Fund.....			1,063 73
		<u>\$</u>	<u>8,289 00</u>

**SCHOOL INSPECTION**

Appropriation.....	\$	800 00	
		<u>\$</u>	<u>800 00</u>

**Expended**

For Labor :			
To Sundry Persons.....	\$	800 00	
		<u>\$</u>	<u>800 00</u>

**STATE AID OFFICE**

Appropriation .....	\$	800 00	
		<u>          </u>	\$ 800 00

**Expended**

For Salaries:			
Geo. E. Worthen, Superintendent.....	\$	1,200 00	
Mary F. O'Brien.....		800 00	
		<u>          </u>	\$ 2,000 00
For Office Supplies.....	\$	47 59	
Sundries .....		26 14	
		<u>          </u>	73 73
			<u>          </u>
			\$ 2,073 73
Returned to General Treasury Fund.....			26 27
			<u>          </u>
			\$ 2,100 00

**STATE AID**

Appropriation.....	\$	16,545 00	
		<u>          </u>	\$ 16,545 00

**Expended**

To Sundry Persons .....	\$	15,059 00	
		<u>          </u>	\$ 16,059 00
Returned to General Treasury Fund.....			486 00
			<u>          </u>
			\$ 16,545 00

**MILITARY AID**

Appropriation.....	\$	3,200 00	
		<u>          </u>	\$ 3,200 00

**Expended**

To Sundry Persons .....	\$	3,132 00	
		<u>          </u>	\$ 3,132 00
Returned to General Treasury Fund.....			68 00
			<u>          </u>
			\$ 3,200 00

## AUDITOR'S REPORT

## SOLDIERS' RELIEF

Appropriation .....	\$ 18,236 00	
	<u>          </u>	\$ 18,236 00

## Expended

To Sundry Persons .....	\$ 14,414 00	
	<u>          </u>	\$ 14,414 00
For Interments .....	756 00	
Physicians .....	520 00	
Provisions, Fuel, etc. ....	2,118 97	
Sundries .....	291 35	
	<u>          </u>	3,686 32
		18,100 32
Returned to General Treasury Fund .....		\$ 135 68
		<u>          </u>
		\$ 18,236 00

## INSPECTOR OF ANIMALS

Appropriation .....	\$ 510 00	
	<u>          </u>	\$ 510 00

## Expended

To W. A. Sherman, Inspector .....	\$ 500 00	
	<u>          </u>	\$ 500 00
Returned to General Treasury Fund .....		10 00
		<u>          </u>
		\$ 510 00

## POLICE—UNDERGROUND WIRES

Balance from 1911 .....	\$ 270 51	
	<u>          </u>	\$ 270 51

## Expended

To Labor .....	\$ 69 00	
Sundries .....	98 03	
	<u>          </u>	\$ 167 00
Returned to General Treasury Fund .....		103 48
		<u>          </u>
		\$ 270 51

**CONTAGIOUS HOSPITAL**

Balance from 1911 .....	\$ 951 07	951 07
	<hr/>	<hr/>
Balance to General Treasury Fund.....	\$ 951 07	
	<hr/>	<hr/>

**INSURANCE**

Appropriation.....	\$ 4,500 00	4,500 00
	<hr/>	<hr/>

**Expended**

For Insurance.....	\$ 4,467 78	4,467 78
	<hr/>	<hr/>
Returned to General Treasury Fund.....		32 22
		<hr/>
	\$ 4,500 00	
	<hr/>	<hr/>

**ERECTION OF CITY STABLE**

Appropriation .....	\$ 35,000 00	35,000 00
	<hr/>	<hr/>

**Expended**

To Advertising.....	\$ 20 80	
Architect .....	832 05	
Contracts .....	21,498 30	
Labor.....	87 95	
Plumbing.....	500 00	
Sundries.....	85 45	
Balance to 1913.....		1,197 45
	<hr/>	<hr/>
		23,024 55
		<hr/>
	\$ 35,000 00	
	<hr/>	<hr/>

**COMFORT STATION**

Appropriation.....	\$ 22,000 00	22,000 00
	<hr/>	<hr/>

## AUDITOR'S REPORT

**Expended**

To Advertising .....	\$	54 60	
Architect .....		682 50	
Contract.....		4,528 78	
Sundries.....		302 05	
Transportation .....		33 00	
		<hr/>	5,600 93
Balance to 1913 .....			16,399 07
			<hr/>
			\$ 22,000 00
			<hr/>

**CITY HOSPITAL REPAIRS**

Appropriation.....	\$	1,292 58	
		<hr/>	1,292 58
			<hr/>

**Expended**

For Labor :			
To Sundry Persons.....	\$	52 20	
		<hr/>	52 20
Balance to 1913.....			1,240 38
			<hr/>
	\$		1,292 58
			<hr/>

**AUDITOR****Salaries**

Appropriation.....	\$	4,100 00	
		<hr/>	4,100 00
			<hr/>

**Expended**

For City Auditor :			
Charles D. Paige .....	\$	1,800 00	
For Clerk Hire.....		2,300 00	
		<hr/>	4,100 00
			<hr/>

**Other Expenses**

Appropriation.....	$\frac{3}{8}$	1,900 00	
		<hr/>	1,900 00
			<hr/>



**Expended**

Printing Commissioners and Auditors Reports.	\$	960 50	
Office Supplies.....		275 25	
Printing for Departments.....		658 18	
			<hr/>
			1,893 93
Returned to General Treasury Fund.....			6 07
			<hr/>
	\$		1,900 00
			<hr/>

**ASSESSORS****Salaries**

Appropriation.....	\$	13,070 00	
			<hr/>
			13,070 00
			<hr/>

**Expended**

## For Principal Assessors:

C. A. Abbott.....	\$	750 00	
A. J. Bazon.....		2,250 00	
D. E. Hogan.....		1,427 41	
J. J. O'Sullivan.....		2,250 00	
			<hr/>
			6,677 41

For Clerk Hire and Assistant Assessors.....			6,352 94
			<hr/>

			\$ 13,030 35
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Returned to General Treasury Fund.....			39 65
			<hr/>

\$ 13,070 00

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**Other Expenses**

Appropriation.....	\$	1,430 00	
			<hr/>
			1,430 00
			<hr/>

**Expended**

For Stationery, Printing, etc.....	\$	931 77	
Sundries.....		300 43	
			<hr/>
			1,232 20

Returned to General Treasury Fund.....			197 80
			<hr/>

\$ 1,430 00

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**TREASURER****Salaries**

Appropriation.....	\$ 9,162 00	
	<hr/>	\$ 9,162 00

**Expended**

For City Treasurer :		
Andrew G. Stiles .....	2,500 00	
For Assistant City Treasurer :		
Joseph Farrell.....	1,800 00	
For Paymaster :		
Charles C. Wilson.....	1,300 00	
	<hr/>	\$ 5,600 00
For Clerk Hire :		
To Sundry Persons.....	\$ 3,552 00	
	<hr/>	\$ 3,552 00
		9,152 00
Returned to General Treasury Fund.....		10 00
		<hr/>
		\$ 9,162 00
		<hr/>

**Other Expenses**

Appropriation.....	\$ 2,775 23	
	<hr/>	1,775 23

**Expended**

For Stationery, Printing, etc.....	\$ 1,012 50	
Sundries .....	1,025 23	
	<hr/>	\$ 2,037 73
For Writing and Distributing Tax Bills :		
To Sundry Persons.....		737 50
		<hr/>
		\$ 2,775 23
		<hr/>

**CITY CLERK'S DEPARTMENT****Salaries**

Appropriation .....	\$ 6,067 67	
	<u>          </u>	6,067 67

**Expended**

For City Clerk:		
Stephen Flynn .....	\$ 1,800 00	
	<u>          </u>	1,800 00
For Assistant Clerk:		
Wm. P. McCarthy .....	1,800 00	
	<u>          </u>	\$ 1,800 00
For Clerk Hire:		
To Sundry Persons .....	2,242 00	
	<u>          </u>	2,242 00
		5,842 00
Returned to General Treasury Fnnd.....		225 67
		<u>          </u>
		\$ 6,067 68

**Other Expenses**

Appropriation .....	\$ 1,492 33	
	<u>          </u>	1,492 33

**Expended**

For Reporting Births .....	\$ 858 80	
Stationery, Printing, etc.....	436 92	
Sundries .....	162 50	
	<u>          </u>	1,458 22
Returned to General Treasury Fund.....		34 11
		<u>          </u>
		\$ 1,492 33

**ELECTIONS****Salaries and Wages**

Appropriation.....	\$	7,172 30	
		<u>          </u>	<u>7,172 30</u>

**Expended**

For Election Officers:			
To Sundry Persons.....	\$	4,417 57	
For Clerks:			
To Sundry Persons .....		863 75	
For Wages:			
To Sundry Persons.....	\$	1,890 98	
		<u>          </u>	<u>\$ 7,172 30</u>

**Other Expenses**

Appropriation.....	\$	3,730 50	
		<u>          </u>	<u>3,730 50</u>

**Expended**

For Clerical Service .....	\$	30 00	
Election Officers.....		1,080 00	
Labor .....		99 18	
State Supervisors.....		10 00	
Stationery, Printing, etc.....		990 20	
Sundries .....		596 07	
Teaming.....		714 01	
		<u>          </u>	3,519 46
Returned to General Treasury Fund.....			211 04
			<u>          </u>
	\$		<u>3,730 50</u>

**REGISTRARS****Salaries and Wages**

Appropriation.....	\$	3,716 32	
		<u>          </u>	<u>3,716 32</u>

**Expended**

## Board of Registrars :

J. O. Allard .....	\$	800 00
H. C. McOsker .....		750 00
Stephen Flynn .....		400 00
Geo. C. Evans.....		187 50
James H. Rooney.....		562 50

2,700 00For Clerical Service..... 1,016 32\$ 3,716 32**Other Expenses**

Appropriation.....	\$	1,300 00
		<u>1,300 00</u>

**Expended**

For Stationery, Printing, etc.....	\$	872 15
Sundries .....		278 52

1,150 67Returned to General Treasury Fund..... 149 33\$ 1,300 00**SUPPLY DEPARTMENT****Salaries**

Appropriation .....	\$	5,254 00
		<u>5,254 00</u>

**Expended**

## For Purchasing Agent:

Edward H. Foye.....	\$	1,800 00
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1,800 00

## For Clerks :

To Sundry Persons.....	\$	3,454 00
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3,454 00\$ 5,254 00

**Other Expenses**

Appropriation.....	\$ 1,388 50	
	<hr/>	1,388 50

**Expended**

For Advertising.....	\$ 83 55	
Carriages, Harnesses and Repairs.....	88 52	
Shoeing and Board of Horse.....	216 64	
Stationery, Printing, etc.....	431 39	
Sundries .....	402 10	
Telephone, Transportation, etc. ....	64 03	
	<hr/>	1,285 96
Returned to General Treasury Fund.....		102 54
		<hr/>
		\$ 1,388 50
		<hr/>

**INTEREST**

Appropriation .....	\$ 146,812 25	
	<hr/>	146,812 25

**Expended**

For Interest.....	\$ 146,812 25	
	<hr/>	146,812 25

**SINKING FUND**

Appropriation.....	\$ 30,500 00	
	<hr/>	30,500 00

**Expended**

To Commissioners of Sinking Fund.....	\$ 30,500 00	
	<hr/>	30,500 00



**CITY DEBT**

Appropriation.....	\$ 281,239 20	
	<u>                    </u>	281,239 20
		<u>                    </u>

**Expended**

To various financial institutions and individuals.	\$ 281,239 20	
	<u>                    </u>	281,239 20
		<u>                    </u>

**TEMPORARY LOAN**

Balance from 1911.....	\$ 700,000 00	
Appropriation.....	1,200,000 00	
	<u>                    </u>	1,900,000 00
		<u>                    </u>

**Expended**

To various financial institutions and individuals.	\$ 1,300,000 00	
	<u>                    </u>	1,300,000 00
Balance to 1918 .....		600,000 00
		<u>                    </u>
		\$ 1,900,000 00
		<u>                    </u>

**STATE TAX**

Appropriation.....	\$ 137,187 50	
	<u>                    </u>	137,187 50
		<u>                    </u>

**Expended**

To Commonwealth of Massachusetts .....	\$ 137,187 50	
	<u>                    </u>	137,187 50
		<u>                    </u>

**NATIONAL BANK TAX**

Appropriation.....	\$ 11,147 99	
	<u>          </u>	11,147 99
		<u>          </u>

**Expended**

To Commonwealth of Massachusetts.....	\$ 11,147 31	
	<u>          </u>	11,147 31
Returned to General Treasury Fund.....		68
		<u>          </u>
		\$ 11,147 99
		<u>          </u>

**COUNTY TAX**

Appropriation.....	\$ 75,505 60	
	<u>          </u>	75,505 60
		<u>          </u>

**Expended**

To County of Middlesex.....	\$ 75,505 60	
	<u>          </u>	75,505 60
		<u>          </u>

**CORPORATION TAX**

Appropriation.....	\$ 1,313 05	
	<u>          </u>	1,313 05
		<u>          </u>

**Expended**

To Commonwealth of Massachusetts.....	\$ 1,313 05	
	<u>          </u>	1,313 05
		<u>          </u>

**STATE HIGHWAY TAX**

Appropriation.....	\$ 115 00	
	<u>          </u>	115 00
		<u>          </u>

**Expended**

To Commonwealth of Massachusetts .....	\$ 115 00	
	<u>          </u>	\$ 115 00
		<u>          </u>

**REFUND OF TAXES AFTER PAYMENT**

Appropriation.....	\$ 205 12	
	<hr/>	205 12
		<hr/>
<b>Expended</b>		
For Refund of Taxes.....	\$ 205 12	
	<hr/>	\$ 205 12
		<hr/>

**ABATEMENT OF TAXES BEFORE PAYMENT**

Balance from 1911.....	\$ 81,127 48	
Appropriated 1912 .....	29,621 53	
	<hr/>	110,749 01
Unappropriated .....		20,223 26
		<hr/>
		130,972 27
Abatements .....	\$ 130,972 27	
	<hr/>	\$ 130,972 27
		<hr/>

**STREET DEPARTMENT****Salaries and Wages**

Appropriation.....	\$115,125 19	
	<hr/>	115,125 19
		<hr/>
<b>Expended</b>		
To Newell F. Putnam, Superintendent.....	\$ 2,000 00	
George W. Hartwell, Assist. Superintendent	1,400 00	
	<hr/>	3,400 00
To Sundry Persons.....	111,665 44	
	<hr/>	111,665 44
		<hr/>
		115, 065 44
Retrnrnd to General Treasury Fund.....		59 75
		<hr/>
		\$ 115,125 19
		<hr/>

**Other Expenses**

Appropriation .....	\$ 26,216 09	
		<u>26,216 09</u>

**Expended**

For Automobiles and Repairs.....	\$ 566 89	
Carriages Harnesses and Repairs ....	796 83	
Express and Transportation .....	115 51	
Gravel, Stone, Cement, Fuel, etc.....	2,547 21	
Hay, Grain, etc. ....	10,615 31	
Horses and Use of Horses .....	454 50	
Lumber .....	643 76	
Paints and Oils.....	622 36	
Stationery, Printing, etc.....	511 75	
Sundries .....	3,012 60	
Teaming .....	3,344 29	
Vetinary Service .....	142 50	
Water, Lighting and Telephone .....	753 55	
Hardware, Tools, etc.....	2,089 03	
		<u>\$ 26,216 09</u>

**STREET WATERING****Wages**

Appropriation .....	\$ 5,000 00	
		<u>5,000 00</u>

**Expended**

For Labor :		
To Sundry Persons.....	\$ 5,000 00	
		<u>5,000 00</u>

**Other Expenses**

Appropriation .....	\$ 14,000 00	
		<u>14,000 00</u>

**Expended**

For Sundries:		
To Sundry Persons.....	\$ 14,000 00	
		<u>14,000 00</u>

## STREET LIGHTING

Appropriation .....	\$ 85,000 00	
	<u>          </u>	85,000 00

**Expended**

For Labor:		
To Sundry Persons. ....	\$ 1,102 17	
		1,102 17
For Corporation Street Lights.....	105 17	
Lighting Streets.....	83,786 20	
Lighting Public Buildings.....	6 46	
		83,897 83
		<u>\$ 85,000 00</u>

## SEWER MAINTENANCE

## Wages

Appropriation!	\$ 14,000 00	
	<u>14,000 00</u>	14,000 00

**Expended**

For Labor:		
To Sundry Persons.....	\$	14,000 00
	<u>          </u>	14,000 00

## Other Expenses

Appropriation .....	\$ 4,000 00	
	<u>          </u>	4,000 00

## Expended

For Brick, Cement, Fuel, etc. ....	\$	191 93	
Boots and Repairing.....		22 50	
Carriages, Harnesses and Repairs .....		92 20	
Hardware, Tools, etc....		881 18	
Lumber .....		65 03	
Sundries .....		2,747 16	
		<hr/>	
	\$		4,000 00

**SEWER CONSTRUCTION**

Balance January 1, 1912.....	\$ 68,198 19	
		<u>68,198 19</u>
<b>Expended</b>		
For Labor :		
To Sundry Persons.....	\$ 54,363 58	
		<u>54,363 58</u>
For Cement, Pipe, etc.....	4,516 35	
Hardware, Fittings, etc.....	2,593 70	
Sundries.....	6,724 56	
		<u>13,834 61</u>
		<u>\$ 68,198 19</u>

**ENGINEERING****Salaries and Wages**

Appropriation.....	\$ 13,512 38	
		<u>13,512 38</u>

**Expended**

For City Engineer :		
To Stephen Kearney .....	\$ 2,500 00	
		<u>2,500 00</u>
For Wages :		
To Sundry Persons .....	\$ 11,012 38	
		<u>11,012 38</u>
		<u>\$ 13,512 38</u>

**Other Expenses**

Appropriation.....	\$ 400 00	
		<u>400 00</u>

**Expended**

For Express, Transportation, Telephone, etc...	\$ 73 95	
Stationery, Printing, etc.....	99 58	
Sundries .....	162 77	
		<u>336 00</u>
Returned to General Treasury Fund.....		<u>63 70</u>
		<u>\$ 400 00</u>



**CONGRESS AND BILLERICA ST. BRIDGES**

Balance January 1st, 1912 .....	\$ 1,838 77	
		<u>1,838 77</u>
<b>Expended</b>		
For Wages :		
To Sundry Persons. ....	\$ 50 76	
		<u>50 76</u>
For Sundries :		
To Sundry Persons.....	\$ 245 39	
		<u>245 39</u>
		\$ 296 15
Balance to 1913 .....		<u>1,542 62</u>
		\$ 1,838 77

**LAWRENCE ST. BRIDGE**

Balance January 1st, 1912 .....	\$ 464 14	
		<u>464 14</u>
Balance to 1913 .....	\$ 464 14	
		<u>464 14</u>

**SHAW ST. EXTENSION**

Balance January 1st, 1912.....	\$ 989 84	
		<u>989 84</u>
Balance to 1913 .....	\$ 989 84	
		<u>989 84</u>

**PAVING GORHAM AND OTHER STREETS**

Balance January 1st, 1912.....	\$ 8,227 66	
Receipts, 1912.....	15 47	
		<u>8,243 13</u>

## AUDITOR'S REPORT

**Expended**

For Wages:

To Sundry Persons.....	\$ 6,306 96	
		6,306 96

For Sundries.....	\$ 402 95	
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Teaming.....	1,533 22	
		1,936 17

	\$ 8,243 13	
--	-------------	--

**MACADAMIZING STREETS, 1911**

Balance January 1st, 1912 .....	\$ 5,591 69	
		5,591 69

**Expended**

For Wages:

To Sundry Persons.....	\$ 4,513 68	
		4,513 68

For Sundries:

To Sundry Persons.....	\$ 1,078 01	
		1,078 01

	\$ 5,591 69	
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**PAINTING AND REPAIRING BRIDGES**

Balance January 1, 1912 .....	\$ 3,872 62	
		3,872 62

**Expended**

For Wages:

To Sundry Persons.....	\$ 3,009 24	
		3,009 24

To Sundries:

To Sundry Persons.....	\$ 863 38	
		863 38

	\$ 3,872 62	
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**STROMQUIST AVE.**

Balance January 1, 1912.....	\$	2,649 49	
		<u>          </u>	2,649 49
			<u>          </u>

**Expended**

For Wages :			
To Sundry Persons.....	\$	2,649 49	
		<u>          </u>	2,649 49
			<u>          </u>

**PAVING EAST MERRIMACK STREET TO FAYETTE**

Balance January 1, 1912 .....	\$	2,700 00	
		<u>          </u>	2,700 00
			<u>          </u>

**Expended**

For Wages :			
To Sundry Persons .....	\$	2,010 23	
		<u>          </u>	\$ 2,010 23
For Sundries :			
To Sundry Persons.....	\$	689 77	
		<u>          </u>	689 77
			<u>          </u>
			\$ 2,700 00
			<u>          </u>

**MARKET STREET BRIDGE**

Appropriation.....	\$	6,500 00	
		<u>          </u>	6,500 00
			<u>          </u>

**Expended**

For Wages :			
To Sundry Persons. ....	\$	3,749 56	
		<u>          </u>	3,749 56
For Sundries :			
To Sundry Persons.....		2,750 44	
		<u>          </u>	2,750 44
			<u>          </u>
			\$ 6,500 00
			<u>          </u>

**MACADAMIZING STREETS 1912**

Appropriation .....	\$ 18,370 50	
	<hr/>	18,370 50
		<hr/>

**Expended**

For Wages:		
To Sundry Persons.....	\$ 14,227 00	
	<hr/>	14,227 00
To Sundries:		
To Sundry Persons.....	4,143 00	
	<hr/>	4,143 00
		<hr/>
	\$ 18,370 00	
	<hr/>	

**PAVING STREETS 1912**

Appropriation.....	\$ 72,836 47	
	<hr/>	72,836 47
		<hr/>

**Expended**

For Wages:		
To Sundry Persons.....	\$ 49,211 84	
	<hr/>	49,211 84
For Sundries.....	12,915 47	
Teaming .....	10,709 16	
	<hr/>	23,624 63
		<hr/>
	\$ 72,836 47	
	<hr/>	

**MAINTAINING AND CLEANING STREETS**

Appropriation.....	\$ 6,000 00	
	<hr/>	6,000 00
		<hr/>

**Expended**

For Wages:		
To Sundry Persons.....	\$ 5,971 80	
	<hr/>	5,971 80
Returned to General Treasury Fund.....		28 20
		<hr/>
	\$ 6,000 00	
	<hr/>	

**WATER WORKS**

Receipts.....	\$ 235,394 78	
		<u>235,394 78</u>

**Expended**

For Salaries and Wages :		
Robert J. Thomas, Superintendent .....	\$ 2,000 00	
John W. Crawford, Secretary .....	1,600 00	
		<u>3,600 00</u>
Sundry Persons, Wages .....	\$ 70,960 42	
		<u>70,960 42</u>
For Automobile Repairs.....	\$ 1,308 24	
Brick, Cement, etc.....	178 91	
Carriages Harnesses and Repairs ....	173 20	
Express, Transportation, etc.....	1,086 99	
Fuel. ....	14,838 87	
Hardware, Hydrants, Meters, etc.....	23,818 12	
Hay, Grain, etc. ....	1,460 90	
Interest.....	65,636 88	
Lighting and Telephone.....	255 98	
Lumber .....	416 54	
Paints, Oils, Packings, etc.....	1,472 00	
Refunds .....	247 93	
Stationery, Printing, etc.....	672 78	
Sundries .....	7,413 46	
		<u>118,980 85</u>
Vacancy List.....	\$ 195 83	
		<u>195 83</u>
		<u>\$193,737 08</u>
Balance to 1913 .....		41,657 70
		<u>\$235,394 78</u>

**WATER WORKS—NEW WELLS, PUMP, RESERVOIR**

Balance January 1st, 1912.....	\$ 76,781 01	
Loan, 1912.....	75,000 00	
		<u>151,781 01</u>

**Expended**

## For Wages:

To Sundry Persons.....	\$ 40,640 11	
		40,640 11

For Hardware, Fittings, etc.....	\$ 3,511 83	
Pipe, Piping, Plumbing, etc.....	15,049 52	
Sundries .....	64,083 82	
Teaming .....	3,936 55	
		86,581 72

\$ 127,221 83

Balance to 1913.....		24,559 18
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\$ 151,781 01**FIRE DEPARTMENT****Salaries and Wages**

Appropriation.....	\$164,985 56	
		164,985 56

**Expended**

## For Chief Engineer:

Edward S. Hosmer.....	\$ 2,200 00	
		2,200 00

To Sundry Persons.....	\$ 149,979 75	
		149,979 74

\$ 152,179 74

Balance to 1913 .....		12,805 82
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\$ 164,985 56**Other Expenses**

Appropriation.....	\$ 27,437 56	
		\$ 27,437 56



**Expended**

For Carriages, Harnesses and Repairs.....	\$	862 50	
Electrical and Automobile Supplies .....		3,458 27	
Express, Transportation, etc.....		277 54	
Fuel .....		3,149 64	
Hardware, Fittings, Hose and Repairs.....		330 69	
Hay, Grains, etc.....		7,658 79	
Horses—Use of Horses.....		48 00	
Shoeing Horses .....		1,349 88	
Stable Supplies .....		284 50	
Stationery, Printing, etc.....		92 90	
Sundries .....		1,199 39	
Veterinary Service .....		148 50	
Water, Lighting and Telephone .....		3,332 79	
			<u>22,193 39</u>
Balance to 1913 .....			5,244 17
			<u>\$ 27,437 56</u>

**BUILDING DEPARTMENT****Wages**

Appropriation .....	\$	15,917 66	
			<u>15,917 66</u>

**Expended**

To Supt. Public Buildings, Frank M. Connor..	\$	1,800 00	
			<u>1,800 00</u>
For Wages:			
To Sundry Persons, Carpenters, Painters, etc.....	\$	14,117 66	
			<u>14,117 66</u>
			<u>\$ 15,917 66</u>

**Other Expenses**

Appropriation .....	\$	10,059 74	
			<u>10,059 74</u>

**Expended**

For Automobile Fittings.....	\$	1,362 58	
Board of Horses .....		907 79	
Carriages, Harnesses and Repairs.....		269 75	
Express and Transportation.....		44 72	
Hardware, etc.....		633 83	
Lumber .....		2,695 78	
Paints, Oils, etc.....		307 79	
Plastering, Roofing and Concrete, Cement, etc. ....		422 43	
Plumbing, Pipe, Fittings, etc.....		1,138 32	
Shoeing Horses.....		161 35	
Stationery, Printing, etc.....		229 27	
Sundries .....		1,606 13	
Water Heater.....		280 00	
			<u>10,059 74</u>

**CEMETERIES—EDSON AND OTHERS****Salaries and Wages**

Appropriation .....	\$	6,361 00	
			<u>6,361 00</u>

**Expended**

For Salaries and Wages:			
To Sundry Persons. ....	\$	5,868 31	
			<u>5,868 31</u>
Returned to General Treasury Fund.....			492 69
			<u>\$ 6,361 00</u>

**Other Expenses**

Appropriation .....	\$	2,161 54	
			<u>2,161 54</u>

**Expended**

For Hardware, Fittings, etc.....	\$	136 06	
Hay, Grain, etc.....		181 54	
Plants, Manure, Loam, Sod, Seed.....		195 40	
Shoeing, Carriages, Harnesses and Repairs.		69 40	
Stationery, Printing, etc.....		145 73	
Sundries .....		1,241 08	
Water, Fuel, Cement, etc.....		192 33	
			<u>2,161 54</u>

**LIQUOR LICENSES**

Appropriation.....	\$ 35,900 00	
	<hr/>	35,900 00
		<hr/>

**Expended**

To Commonwealth of Massachusetts.....	\$ 35,713 00	
	<hr/>	35,713 00
Returned to General Treasury Fund.....		187 09
		<hr/>
	\$	35,900 00
		<hr/>

**MESSENGER'S DEPARTMENT****Salaries and Wages**

Appropriation.....	\$ 11,101 00	
	<hr/>	11,101 00
		<hr/>

**Expended**

For City Messenger :		
To Owen Monahan.....	\$ 1,002 67	
C. F. Cronin.....	9 67	
	<hr/>	1,012 34
For Wages :		
To Sundry Persons.....	\$ 9,894 62	
	<hr/>	9,894 62
		<hr/>
		10,906 96
Returned to General Treasury Fund.....		194 04
		<hr/>
	\$	11,101 00
		<hr/>

**Other Expenses**

Appropriation.....	\$ 6,914 00	
	<hr/>	6,914 00
		<hr/>

**Expended**

For Entertainment and Decorations.....	\$	90 15	
Express, Transportation, etc.....		38 25	
Fuel .....		2,713 11	
Furniture, Fixtures and Repairs.....		334 82	
Hardware .....		72 41	
Lighting City Hall.....		1,209 12	
Lighting Memorial Building.....		125 27	
Stationery, Printing, etc .....		70 59	
Sundries .....		1,921 02	
			<u>6,574 74</u>
Returned to General Treasury Fund.....			339 26
			<u>\$ 6,914 00</u>

**MOTH AND BEETLE EXTERMINATION****Wages**

Appropriation.....	\$	8,022 14	
			<u>8,022 14</u>

**Expended**

For Wages :			
To Sundry Persons.....	\$	7,889 32	
			<u>7,889 32</u>
Returned to General Treasury Fund .....			132 82
			<u>8,022 14</u>

**Other Expenses**

Appropriation .....	\$	1,600 00	
			<u>1,600 00</u>

**Expended**

For Hardware, etc. ....	\$	274 13	
Stationery, Office Supplies, Printing, etc. ...		118 25	
Sundries .....		1,208 00	
			<u>1,599 16</u>
Returned to General Treasury Fund.....			84
			<u>\$ 1,600 00</u>

**SMOKE INSPECTOR****Salaries and Wages**

Appropriation .....	\$	300 00	
			300 00

**Expended**

To Smoke Inspector :			
John F. Hollowood .....	\$	300 00	
			300 00

**Other Expenses**

Appropriation .....	\$	100 00	
			100 00

**Expended**

For Office Supplies .....	\$	29 50	
Sundries .....		51 00	
			80 50
Returned to General Treasury Fund .....			19 50
			\$ 100 00

**RIFLE RANGE****Wages**

Appropriation .....	\$	628 00	
			628 00

**Expended**

For Wages :			
To Sundry Persons .....	\$	628 00	
			628 00

**Other Expenses**

Appropriation .....	\$	503 48	
			503 48

**Expended**

For Sundries .....	\$	497 37	
			497 37
Returned to General Treasury Fund .....			6 11
			\$ 503 48

**CITY SEALER****Salaries and Wages**

Appropriation .....	\$ 1,985 00	
		<u>1,985 00</u>

**Expended**

To City Sealer :		
John W. Stott.....	\$ 1,200 00	
		<u>1,200 00</u>
For Wages.....	785 00	
		<u>785 00</u>
		<u>\$ 1,985 00</u>

**Other Expenses**

Appropriation .....	\$ 329 87	
		<u>329 87</u>

**Expended**

For Stationery, Printing, etc.....	\$ 21 10	
Sundries.....	308 77	
		<u>329 87</u>

**CITY WEIGHER****Salaries**

Appropriation .....	\$ 800 00	
		<u>800 00</u>

**Expended**

To City Weigher :		
George F. Noonan .....	\$ 800 00	
		<u>800 00</u>

**Other Expenses**

Appropriation .....	\$ 10 00	
		<u>10 00</u>

**Expended**

For Sundries.....	\$ 9 25	
		<u>9 25</u>
Returned to General Treasury Fund.....		75
		<u>\$ 10 00</u>



**WIRE DEPARTMENT****Salaries**

Appropriation .....	\$ 2,228 00	
	<hr/>	2,228 00

**Expended**

For Inspector of Wires ; W. H. Mahan .....	\$ 1,600 00	
	<hr/>	1,600 00
For Clerk Hire .....	628 00	
	<hr/>	628 00
		<hr/>
	\$ 2,228 00	
		<hr/>

**Other Expenses**

Appropriation .....	\$ 300 00	
	<hr/>	300 00

**Expended**

For Stationery, Printing, etc.....	\$ 97 55	
Sundries .....	196 43	
	<hr/>	293 98
Returned to General Treasury Fund.....		6 02
		<hr/>
	\$ 300 00	
		<hr/>

**PARK DEPARTMENT****Salaries and Wages**

Appropriation.....	\$ 9,001 50	
	<hr/>	9,001 50

**Expended**

To Supt. Park Dept. : Chas. A. Whittet .....	\$ 1,308 24	
	<hr/>	1,308 24
To Sundry Persons.....	7,693 26	
	<hr/>	7,693 26
		<hr/>
	\$ 9,001 50	
		<hr/>

**Other Expenses**

Appropriation .....	\$	3,131 00	
			<u>3,131 00</u>

**Expended**

For Express, Transportation, etc....	\$	8 48	
Hardware .....		122 23	
Hay, Grain, etc. ....		1,188 69	
Plants, Shrubs, Loam, etc. ....		574 69	
Shoeing, Carriages, Harnesses, etc.....		326 79	
Stationery, Printing, etc. ....		268 56	
Sundries .....		597 29	
Water and Lighting .....		44 27	
			<u>3,131 00</u>

**CARE OF TREES**

Appropriation .....	\$	800 00	
			<u>800 00</u>

**Expended**

For Wages :			
To Sundry Persons.....	\$	606 09	
			606 09
For Sundries.....		193 91	
			<u>193 91</u>
			<u>\$ 800 00</u>

**SHEDD PARK**

Balance January 1st, 1912 .....	\$	2,092 07	
			<u>2,092 07</u>

**Expended**

For Labor :			
To Sundry Persons.....	\$	1,533 79	
			1,533 79
For Sundries.....		558 12	
			<u>558 12</u>
Returned to General Treasury Fund.....			<u>16</u>
			<u>\$ 2,092 07</u>

**PLAY GROUNDS**

Appropriation .....	\$ 1,000 00	
		<u>1,000 00</u>

**Expended**

For Labor :		
To Sundry Persons .....	\$ 778 47	
		<u>778 47</u>
For Sundries .....	\$ 221 53	
		<u>221 53</u>
		<u>\$ 1,000 00</u>

**SCHOOL HOUSES****Wages**

Appropriation .....	\$ 12,526 70	
		<u>12,526 70</u>

**Expended**

To Sundry Persons .....	\$ 11,735 22	
		<u>11,735 22</u>
Returned to General Treasury Fund .....		<u>791 48</u>
		<u>\$ 12,526 70</u>

**Other Expenses**

Appropriation .....	\$ 9,209 23	
		<u>9,209 23</u>

**Expended**

For Electrical Supplies .....	\$ 317 33	
Hardware, etc .....	1,642 66	
Lumber .....	451 03	
Mason Work, Roofing, Plastering, etc .....	1,207 91	
Paints, Oils, etc .....	1,401 48	
Plumbing, Pipe, Fittings, etc .....	2,439 96	
Sundries .....	992 46	
		<u>8,452 83</u>
Returned to General Treasury Fund .....		<u>756 40</u>
		<u>\$ 9,209 23</u>

**HUNTINGTON HALL****(Commissioners' Fund)**

Balance January 1st, 1912.....	\$	267 65	
		<u>          </u>	267 65

**Expended**

Returned to General Treasury Fund.....	\$	267 65	
		<u>          </u>	267 65

**RACE STREET FIRE HOUSE**

Balance from 1911.....	\$	5,833 07	
		<u>          </u>	5,833 07

**Expended**

For Wages:			
To Sundry Persons.....		328 73	
		<u>          </u>	328 73
For Sundries.....	\$	5,504 34	
		<u>          </u>	5,504 34
			<u>          </u>
	\$		5,833 07

**FIRE HOUSE IMPROVEMENTS**

Balance from 1911 .....	\$	608 55	
Appropriation .....		7,796 41	
		<u>          </u>	8,404 96

**Expended**

For Wages:			
To Sundry Persons.....	\$	3,318 88	
		<u>          </u>	3,318 88
For Sundries .....		4,447 03	
		<u>          </u>	4,447 03
			<u>          </u>
	\$		7,765 91
Balance to 1913 .....			639 05
			<u>          </u>
	\$		8,404 96

**LICENSE COMMISSIONERS**

Appropriation .....	\$ 3,800 00	
	<hr/>	3,800 00
		<hr/>

**Expended**

For Salaries :

To John J. Mullaney .....	\$ 800 00	
Charles H. Hanson .....	750 00	
T. P. Boulger .....	750 00	
J. J. Flaherty .....	1,500 00	
	<hr/>	3,800 00
		<hr/>

**Other Expenses**

Appropriation .....	\$ 200 00	
	<hr/>	200 00
		<hr/>

**Expended**

For Sundries .....	188 06	
	<hr/>	\$ 188 06
Returned to General Treasury Fund .....		11 94
		<hr/>
		\$ 200 00
		<hr/>

**RIFLE RANGE IMPROVEMENTS 1912**

Appropriation .....	\$ 3,000 00	
	<hr/>	3,000 00
		<hr/>

**Expended**

For Wages :

To Sundry Persons .....	\$ 1,854 48	
	<hr/>	1,854 48
For Sundries .....		405 61
		<hr/>
		\$ 2,260 09
Balance to 1913 .....		739 91
		<hr/>
		3,000 00
		<hr/>

# REBUILDING ROAD ON NORTH SIDE MERRIMACK RIVER DRACUT

Appropriation .....	\$ 5,100 00	
	<hr/>	5,100 00

## Expended

To Treasurer Middlesex County.....	\$ 5,091 57	
	<hr/>	5,091 57
Returned to General Treasury Fund.....		8 43
		<hr/>
		\$5,100 00
		<hr/>

# CARNEY MEDAL FUND

Balance from 1911.....	\$ 200 00	
	<hr/>	200 00
Balance to 1913 .....	200 00	
	<hr/>	200 00
		<hr/>

# SCHOOL DEPARTMENT

Appropriation .....	\$ 420,983 57	
	<hr/>	420,983 57

## Expended

### Paid to Teachers of Day Schools :

High School .....	\$ 41,858 87	
Grammar Schools .....	114,529 67	
Primary and Mixed Schools.....	84,689 25	
Kindergartens.....	12,106 53	
Special Teachers.....	4,963 82	
Permanent Substitutes.....	2,874 01	
	<hr/>	261,022 15

### School Physicians and School Visitor:

Paid School Physicians.....	1,800 00	
Paid School Visitor .....	638 89	
	<hr/>	2,438 89



## Janitors :

Paid Janitors of Day Schools .....	\$ 51,397 61	
		51,397 61

## Evening Schools :

Teachers, High and Elementary Schools...	13,007 25	
Teachers, Drawing and Art Schools .....	2,069 00	
Janitors.....	2,470 50	
		17,546 75

## Cost of Supervision :

Superintendent of Schools .....	3,075 00	
Office Assistant.....	687 50	
Truant Officers.....	4,704 41	
Assistant in Supply Room.....	864 50	
Extra Assistant in Supply Room .....	25 00	
Assistant Supervisor of Janitors.....	437 50	
		9,793 91

Industrial School Teachers and Janitors.....	16,195 18	
		16,195 18

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\$358,394 49

For Board of Horses and Shoeing.....	\$ 592 85	
Books .....	6,278 41	
Carriages Harnesses and Repairs ....	181 55	
Electrical Supplies.....	868 03	
Express, Transportation, etc.....	345 44	
Fuel. ....	18,840 31	
Furniture, Repairs, Cloth, etc.....	373 23	
Hardware.....	885 33	
Laboratory Supplies.....	280 04	
Music and Musical Supplies .....	443 49	
Paints, Oils, etc.....	248 59	
Stationery, Printing, etc.....	7,062 97	
Sundries .....	10,238 31	
Water and Lighting .....	6,252 69	
		52,891 24

## For Industrial School :

Express and Transportation.....	457 50	
Hardware, Machinery, etc.....	4,549 10	
Lumber .....	778 52	
Sundries .....	3,361 19	
		9,146 31

## For Evening School :

Sundries .....	551 53	
		551 53

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\$ 62,589 08

**LOWELL TEXTILE SCHOOL**

Appropriation .....	\$ 9,000 00	
	<hr/>	9,000 00
		<hr/>

**Expended**

To Trustees Lowell Textile School.....	8,000 00	
	<hr/>	8,000 00
Returned to General Treasury Fund.....		1,000 00
		<hr/>
	\$	9,000 00
		<hr/>

**LIBRARY**

Appropriation.....	\$ 18,500 00	
	<hr/>	18,500 00
		<hr/>

**Expended**

To Trustees of City Library .....	18,500 00	
	<hr/>	18,500 00
		<hr/>

**COMMISSIONERS****Salaries**

Appropriation .....	\$ 10,000 00	
	<hr/>	10,000 00
		<hr/>

**Expended**

To Andrew E. Barrett .....	2,500 00	
George H. Brown .....	2,500 00	
Lawrence Cummings.....	2,500 00	
James E. Donnelly.....	2,500 00	
	<hr/>	10,000 00
		<hr/>

**Incidental Fund**

Appropriation .....	\$ 4,131 06	
	<hr/>	4,131 06
		<hr/>
For Sundries.....	\$ 4,131 06	
	<hr/>	4,131 06
		<hr/>

**MEMORIAL DAY—G. A. R.**

Appropriation .....	\$ 1,000 00	
	<hr/>	1,000 00
		<hr/>

**Expended**

For Printing and Music .....	\$ 265 00	
Entertainment and Transportation .....	78 10	
Sundries .....	656 90	
	<hr/>	1,000 00
		<hr/>

**MEMORIAL DAY—S. W. V.**

Appropriation .....	\$ 350 00	
	<hr/>	350 00
		<hr/>

**Expended**

For Entertainment and Transportation .....	95 00	
Printing and Music .....	147 25	
Sundries .....	107 75	
	<hr/>	350 00
		<hr/>

**BAND CONCERTS**

Appropriation .....	\$ 700 00	
	<hr/>	700 00
		<hr/>

**Expended**

For Music .....	\$ 670 50	
Sundries .....	16 05	
	<hr/>	686 55
Returned to General Treasury Fund .....		13 45
		<hr/>
		\$ 700 00
		<hr/>

**JULY FOURTH**

Appropriation .....	\$ 913 56	
	<hr/>	913 56
		<hr/>

**Expended**

For Labor .....	\$ 45 37	
Music and Bell Ringing .....	643 70	
Sundries .....	224 49	
	<hr/>	913 56
		<hr/>



# GENERAL INFORMATION

MAYOR'S ADDRESS

PUBLIC BURIAL GROUNDS REPORT

SINKING FUND COMMISSIONERS' REPORT

CITY DEBT AND INTEREST PAYMENTS

TEMPORARY LOANS

OVERLAYS—DEBT LIMIT

SINKING FUND PAYMENTS

PROPERTY EXEMPT FROM TAXATION

LOANS OF 1912

VALUATION AND TAX RATE TABLE

FUNDS

PROPERTY OWNED BY CITY

APPROPRIATIONS FOR 1912

ASSESSORS REPORT

INSURANCE

FINANCIAL ORDINANCE





## Address of Mayor James E. O'Donnell

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We are assembled here today as the five regularly elected representatives of a great and growing community, to take up the administration of public affairs under a radical electoral experiment and an equally fundamental change in the form of government. At this time and place, certainly, we should be imbued with a deep appreciation of the solemn responsibility that rests upon us, and our oath of office should be something more than a recitative formality. The presence of a large and representative gathering of our fellow citizens adds to the impressiveness of the occasion and gives testimony of the widespread interest taken in the administration of the city government at this turning point in our local municipal history.

This inauguration of the first city government under the amended charter marks an important epoch in the history of Lowell. For the first time the mayor and board of aldermen have been nominated and elected without the intervention of political party organizations. A municipal election has been held from which all party designations, issues and influences were eliminated.

The administration of public affairs is now vested in a single board of five—the municipal council, each member supervising one of the five main administrative departments, the department coming under the direction of the mayor, that of public safety being prescribed by the charter, while the others are to be assigned by the members of the council. While the mayor is relieved of much of his executive power in becoming a co-ordinate member of the council, he is specially nominated and elected, his salary is specially provided for and he remains, as under the old order, the city's official head, with all the accompanying duties and obligations of that honorable position.

It is not my province nor my intention to speak for my colleagues on the commission, relative to the policies to be adopted for the future, but I think I may say with all propriety that each member of this commission, like myself, accepts the position to which you have chosen him, as an opportunity for service, and desires that this spirit shall rule in the departments under his supervision. It would be impossible at this time for us to outline all the policies that will be followed in the different departments. We shall be guided by study, investigation and experience. It will be our joint effort to give the city of Lowell a responsible and efficient government and the individual effort of each of us to administer the affairs of his department to the best of his ability. With this end in view we ask the hearty co-operation, patience and good-will of all citizens and loyal and effective work from our assistants in every department. We enter upon our new duties facing many serious problems and confronted by many extraordinary demands upon the city's finances, most of which burdens

have been contracted for or assumed by former governments. The change to a radically different form of government will of necessity cause considerable friction and some individual disappointment. The result of our first year's work may not make a material showing but as we build for the future we must build wisely, proceeding with care and caution, for what is done this year will be the nucleus of the greater work to come, and only upon a firm foundation can the grand superstructure of the future endure.

The elimination of the necessity for the concurrent vote of two boards. the doing away with the numerous standing committees, and of the possibility of the mayor's veto and re-reference, will largely contribute to the dispatch of business. The public meetings of the municipal council with votes duly recorded as required by the charter will insure to the city daylight business methods, and the opportunity for the people as a whole to watch our expenditures. The placing of one commissioner at the head of each department, and the attitude of the municipal council in looking to him for his recommendation as to matters concerning his department will lead to the fixing of personal responsibility for official acts, often unattainable under the old system. This same division of the city's business into departments under responsible heads will prove to be an incentive to personal initiative that will undoubtedly make for the city's benefit. The fact that each head of a department must come to the municipal council for final authority to act on all important matters and that all expenditures are submitted for the approval of the majority, will insure a board knowledge on the part of the municipal council of the city's affairs in every department.

It will be my personal policy and doubtless the policy of the other members of the council to meet all of the city's obligations and to make such public improvements as are within the means of the city's purse and in the interest of the greatest number of people. I consider it better for some desirable project to wait its time rather than impair the city's credit by plunging into debt to be left as a burden to future generations. The future will have its own problems to solve, financial and otherwise, and it is incumbent upon us, by tact and foresight, to meet our present day problems as business men in the manner that will best subserve the highest interests of municipality.

The present and future growth of the city of Lowell as a manufacturing centre depends largely on the keeping of our tax rate within reasonable limits and hence the added necessity for economy. We all love our city and are proud of it and we are proud of our people; for no manufacturing city throughout this land can boast of a more intelligent or law-abiding population. Our Board of Trade is a flourishing, enterprising and substantial organization and we ask its co-operation and in fact the co-operation of all citizens in our work. A commendable spirit of civic pride and public service is growing among us which if developed will place Lowell in the forefront, as a thrifty, peace loving and prosperous community, in which any man may well feel proud to claim citizenship.

January, 1912.

# STATEMENT OF CITY TREASURER RELATING TO SPECIAL FUNDS FOR CARE OF PUBLIC BURIAL GROUNDS

LOWELL, MASS., JAN. 1, 1913

TO THE MUNICIPAL COUNCIL:

Gentlemen:—I have the honor to submit the following statement of special funds in my hands deposited for perpetual care of lots in the Public Burial Grounds of the City of Lowell:

On hand Jan. 1, 1912.....		\$ 72,525 00
Received during the year from:		
Charles Irvine, Exr. ....	\$	100 00
Mrs. Mary A. Dunn .....		100 00
Frank Bryant .....		100 00
Robert J. Gilmore.....		100 00
C. F. Stackpole.....		100 00
Mary W. Walker.....		100 00
Martha H. Rudder .....		100 00
Frederick Ricks.....		100 00
Catherine Shaw.....		100 00
Kate E. Gordon and Louis S. Fournier....		100 00
Helen V. Halsted.....		100 00
Caroline Temple.....		100 00
Mary V. Mason.....		100 00
E. M. Bixby.....		100 00
Esther M. Haynes .....		100 00
Mrs. E. A. Wight.....		100 00
“ “ “ .....		100 00
Edwin S. Bickford.....		100 00
“ “ “ .....		100 00
Emily E. Brown.....		100 00
Alexander Duncan.....		100 00
Bertha M. Dexter.....		100 00
Carry F. Stafford.....		100 00
Elynn W. Lovejoy.....		100 00
Grace A. Sargent, Exr. ....		100 00
Raymah Robinson.....		100 00
Mrs. George E. Evans.....		100 00
Carrie M. Bailey.....		100 00
Minnie A. Shattuck. ....		100 00
Mrs. Daniel E. Cameron.....		100 00
Louise Tainter .....		100 00
Joseph W. Bowers.....		100 00
John P. Farley for Mary A. Long ..		100 00
Mary E. Caldwell.....		100 00
G. H. Bent .....		100 00

## AUDITOR'S REPORT

Ellen M. Freeman.....	100 00	
Isabelle Langley.....	50 00	
John H. Dolloff.....	100 00	
Mary Ward.....	100 00	
Susan S. McFarlin.....	100 00	
Alice E. McRitchie.....	50 00	
Hannah A. Peabody.....	50 00	
Joseph Bowers.....	100 00	
		<hr/>
		4,150 00
		<hr/>
		\$ 76,675 00
		<hr/>

The following amounts are invested as follows:

Lowell Inst. for Savings .....	\$ 8,875 00	
Washington Savings Inst. ....	10,050 00	
Traders' National Bank.....	8,825 00	
Mechanics' Savings Bank.....	9,600 00	
Central Savings Bank.....	10,650 00	
City Inst. for Savings.....	9,400 00	
Merrimack River Savings Bank.....	9,700 00	
Lowell Five Cent Savings Bank.....	9,575 00	
		<hr/>
		76,675 00
		<hr/>

Respectfully,

ANDREW G. STILES,

Treasurer and Collector.

## REPORT OF THE COMMISSIONERS OF THE SINKING FUNDS FOR THE YEAR 1912

LOWELL, MASS., JAN. 1, 1913

TO THE MUNICIPAL COUNCIL OF LOWELL:

Gentlemen:—The Commissioners of the Sinking Funds of the City of Lowell have the honor to submit the following report of the several Sinking Funds of said city and of the Hapgood Wright Centennial Trust Fund for the year 1912.

Full value of all Sinking Funds Jan. 1, 1913...	\$ 1,094,172 73	
Full value of all Sinking Funds Jan. 1, 1912.....	1,018,386 41	
		<hr/>
Increase during the year.....	\$ 75,786 32	75,786 32

Value of the Water Loan Sinking Fund Jan. 1, 1913.....	\$ 625,209 08	
Value of the Water Loan Sinking Fund Jan. 1, 1912 .....	582,354 61	
Increase during the year.....	42,854 47	42,854 47
Value of all other Sinking Funds Jan. 1, 1913...	\$ 468,963 65	
Value of all other Sinking Funds Jan. 1, 1912...	436 031 80	
Increase during the year.....	\$ 32,931 85	32,931 85
Total increase as above.....		<u>\$ 75,786 32</u>
Value of the Hapgood Wright Centennial Trust Fund Jan. 1, 1913.....	4,467 13	
Value of the Hapgood Wright Centennial Trust Fund Jan. 1, 1912 .....	4,293 69	
Increase during the year.....	\$ 173 44	173 44

A statement of the receipts, payments and present value of the several Sinking Funds and a list of the securities in each follows:

City Hall and Memorial Bld'g Fund.....	\$ 289,616 60	
Lowell High School Fund.....	96,837 23	
New School Houses Sinking Fund .....	82,509 82	
Water Loan Sinking Fund.....	625,209 08	
		<u>1,094,172 73</u>

### CITY HALL AND MEMORIAL BUILDING SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1912.....	\$ 267,600 00	\$ 2,823 72	\$ 270,423 72
Received during 1912:			
Cash—Annual Appropriation..		7,500 00	
Income on Investment....		11,399 44	
Income on Bank Deposits.		126 77	
Securities Bought in 1912.....	25,000 00		
Securities Matured in 1912.....		4,200 00	
		<u>\$ 26,049 93</u>	
Paid for securities in 1912....		24,833 33	
On hand Jan. 1, 1913.....	\$ 288,400 00	\$ 1,216 60	\$ 289,616 60
Increase during 1912.....			<u>19,192 88</u>



## Securities belonging to this Fund :

5 City of Brockton, coupon bonds, 4%.....	\$ 5,000 00
1 Town of Reading, coupon bond, 4%.....	1,000 00
2 Town of Wrentham, coupon bonds, 4%.....	2,000 00
9 Town of Arlington, coupon bonds, 4%.....	9,000 00
8 Town of Stoughton, coupon bonds, 4% .....	8,000 00
3 City of Saginaw coupon bonds 4% .....	3,000 00
6 Fitchburg R. R. coupon bonds 4%.....	6,000 00
1 City of Boston Reg. Bond .....	21,000 00
1 City of Brockton Reg. bond 4%.....	1,000 00
10 C. B. & Q. R. R. coupon bonds 4%.....	10,000 00
19 Illinois Central R. R. coupon bonds 4%.....	19,000 00
7 N. Y. Lack & West. R. R. coupon bonds 6% .	7,000 00
7 City of Indianapolis coupon bonds 4%.....	7,000 00
1 City of Brockton Reg. bond 4%.....	1,000 00
11 Winona & St. Peter R. R. coupon bonds 7%.	11,000 00
6 City of Malden coupon bonds 4% .....	6,000 00
10 Lynn & Boston St. R. R. coupon bonds 5%..	10,000 00
5 N. Y. N. H. & H. R. R. coupon bonds 4%....	5,000 00
5 Illinois Central R. R. coupon bonds 3½% ....	5,000 00
7 City of Portsmouth coupon bonds 4% .....	7,000 00
10 City of Augusta coupon bonds 4%.....	10,000 00
3 N. Y. N. H. & H. R. R. coupon bonds 4%....	3,000 00
1 City of Lowell coupon bond 4%.....	1,000 00
2 C. B. & Q. R. R. coupon bonds 4%.....	2,000 00
10 Fitchburg R. R. coupon bonds 4% .....	10,000 00
10 Boston & Maine R. R. coupon bonds 4%....	10,000 00
4 Town of Melrose coupon bonds 4% .....	4,000 00
1 City of Providence reg. bond 4% .....	10,000 00
1 City of Providence reg. bond 4% .....	1,000 00
10 Del. & Hudson R. R. coupon bond 4%.....	10,000 00
1 City of Boston, reg. bond, 3½%.....	5,000 00
1 City of Lowell, Serial Note, 4¼%.....	1,400 00
1 Chicago & N. W. R.R., reg. bond, 4%.....	10,000 00
8 Am. Tel. & Tel. Co., coupon bonds, 4%.....	8,000 00
5 Worcester Consolidated R.R., coupon bond, 5%.....	5,000 00
10 Kansas City, coupon bonds, 4½%.....	10,000 00
2 City of Newton, coupon bonds, 4%.....	2,000 00
6 C. B. & Q. R.R., coupon bonds, 4%.....	6,000 00
5 Town of Melrose, coupon bonds, 4%.....	5,000 00
25 City of Lowell, coupon bonds, 4%.....	25,000 00
1 Concord & Montreal R.R., coupon bond, 4%..	1,000 00
1 Commonwealth of Mass., reg. bond, 3½% ....	5,000 00

Cash on Deposit in Appleton Nat. Bank,.....

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288,400 00  
1,216 60

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\$ 289,616 60

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## WATER LOAN SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1912.....	\$ 578,199 10	\$ 4,155 51	\$ 582,354 61
Cash—Annual Appropriation.....		16,000 00	
Income on Investments .....		25,525 80	
Income on Bank Deposits.....		357 92	
Securities Bought in 1912.....		70,500 00	
Securities Matured or sold in 1912..		32,171 30	
		<hr/>	
		\$ 78,210 53	
Paid for Securities in 1912.....		69,529 25	
		<hr/>	
On hand Jan. 1, 1913.....	\$616,527 80	\$ 8,671 28	\$ 625,209 08
Increase during 1912.....			42,854 47
			<hr/>

## Securities belonging to this Fund :

4 City of Lewiston, coupon bonds, 4%.....	4,000 00
3 Boston & Maine R.R., coupon bonds, 4% ....	3,000 00
12 Town of Athol, coupon bonds, 4%.....	12,000 00
15 City of Portsmouth, coupon bonds, 4%.....	15,000 00
14 City of Waterville, coupon bonds, 4%.....	14,000 00
1 City of Boston, reg. bond, 4%.....	61,000 00
5 City of Saginaw, coupon bonds, 4%.....	5,000 00
15 Fitchburg R.R., coupon bonds.....	15,000 00
8 C. B. & Q., R.R, coupon bonds, 4%.....	8,000 00
4 Illinois Central R.R., coupon bonds, 4% .....	4,000 00
1 Boston & Maine R.R., reg. bond, 4½% .....	10,000 00
30 No. Western R.R., coupon bonds, 7% .....	15,000 00
9 N. Y., Lack. & West. R.R., coupon bonds, 6%.	9,000 00
4 Town of Sharon, coupon bonds, 4% .....	4,000 00
2 St. Johnsbury & Lake Champlain R.R., coupon bonds, 5% .....	2,000 00
18 Lynn & Boston St. R.R., coupon bonds, 5%..	18,000 00
20 Illinois Central R.R., coupon bonds, 3½%....	20,000 00
60 N. Y., N. H. & H. R.R., coupon bonds, 4%..	60,000 00
35 Boston Elevated, coupon bonds, 4%.....	35,000 00
8 C. B. & Q. R.R., coupon bonds, 4%.....	8,000 00
48 Town of Northfield, coupon bonds, 3½%....	24,000 00
15 B. & M. R.R., coupon bonds, 4% .....	15,000 00
1 City of Melrose, coupon bond, 4%.....	1,000 00
1 City of New Bedford, reg. bond, 5%.....	28,000 00
3 City of Boston, reg. bonds, 3½%.....	15,000 00
15 Del. & Hud. R.R., coupon bonds, 4%.....	15,000 00
6 Mil. & Lake Shore R.R., coupon bonds, 6%...	6,000 00
16 Am. Tel. & Tel. Co., coupon bonds, 4% .....	16,000 00
1 City of Lowell, serial note, 4%.....	1,027 80



5 Del. & Hud. R.R., reg. bonds, 7% .....	25,000 00	
20 Worcester Consolidated, coupon bonds, 5%..	20,000 00	
15 City of Chicago, coupon bonds, 4%.....	15,000 00	
4 C. B. & Q. R.R., coupon bonds, 4%.....	4,000 00	
7 Winona & St. Peter R.R., coupon bonds, 7%..	7,000 00	
1 B. & M. R.R., coupon bond, 4%.....	1,000 00	
5 N. Y., N. H. & H. R R., coupon bonds, 4%...	5,000 00	
6 Worcester, Nashua & Rochester R.R., coupon bonds, 4%.....	6,000 00	
2 Boston & Lowell R.R., coupon bonds, 4%.....	2,000 00	
4 Town of Lexington, reg. bonds, 4%.....	4,000 00	
1 Chicago & No. Western R.R., reg. bond, 4%..	5,000 00	
23 City of Lowell, coupon bonds, 4%.....	23,000 00	
10 Boston Elevated, coupon bonds, 5%.....	10,000 00	
10 City of Haverhill, coupon bonds, 4%.....	10,000 00	
1 City of Portland, reg. bond, 3½%.....	4,500 00	
15 Concord & Montreal R.R., coupon bonds, 4%	15,000 00	
10 Am. Tel. & Tel. Co., coupon bonds, 4%.....	10,000 00	
4 Town of Canton, coupon bonds, 4%.....	4,000 00	
3 City of Minneapolis, coupon bonds, 4%.....	3,000 00	
		616,527 80
Cash on Deposit in Appleton Nat. Bank .....		8,631 28
		<u>\$ 625,209 08</u>

### LOWELL HIGH SCHOOL SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1912.....	\$ 89,000 00	\$ 1,082 91	\$ 90,082 91
Received during 1912:			
Cash—Annual Appropriation.....		3,000 00	
Income on Investments.....		3,645 00	
Income on Bank Deposits.....		50 06	
Securities Bought in 1912 .....	8,000 00		
Securities Matured in 1912.....		1,500 00	
		<u>\$ 9,277 97</u>	
Paid for Securities in 1912....		7,940 74	
On hand Jan. 1, 1913.....	\$ 95,500 00	\$ 1,337 23	\$ 96,837 23
Increase during 1912.....			<u>6,754 32</u>

Securities belonging to this Fund:

7 City of Portsmouth, coupon bonds, 4 per cent	7,000 00
5 City of Indianapolis, coupon bonds, 4 per cent.	5,000 00
4 Fitchburg R.R., coupon bonds, 4 per cent.....	4,000 00

5 C. B. & Q. R.R., coupon bonds, 4 per cent....	5,000 00	
7 Illinois Central, coupon bonds, 4 per cent.....	7,000 00	
2 City of Saginaw, coupon bonds, 4 per cent.....	2,000 00	
1 Boston & Maine R.R., coupon bond, 4 per cent.	1,000 00	
10 N. Y., N. H. & H. R.R., coupon bonds, 4 per cent.....	10 000 00	
1 N. Y., Lack. & West. R.R., coupon bond, 6 per cent.....	1,000 00	
12 N. Y., N. H. & H. R.R., coupon bonds, 4 per cent.....	12,000 00	
5 C. B. & Q. R.R., coupon bonds, 4 per cent....	5,000 00	
1 City of Lowell, serial note, 4½ per cent.....	750 00	
1 City of Lowell, serial note, 4½ per cent.....	1,750 00	
5 City of Milwaukee, coupon bonds, 4 per cent..	5,000 00	
1 Chicago & No. West. R.R., reg. bond, 4 per cent.....	5,000 00	
3 Am. Tel. & Tel. Co., coupon bonds, 4 per cent.	3,000 00	
2 Town of Winchester, coupon bonds, 3½ per cent.....	2,000 00	
3 West End St. R.R., coupon bonds, 4½ per ct.	3,000 00	
2 City of Lowell, coupon bonds, 4 per cent.....	2,000 00	
2 City of Haverhill, coupon bonds, 4 per cent...	2,000 00	
2 N. Y., Lack. & West. R.R., coupon bonds, 6 per cent.....	2,000 00	
8 City of Lowell, coupon bonds, 4 per cent.....	8,000 00	
2 City of Salem, coupon bonds, 3½ per cent....	2,000 00	
		95,500 00
Cash on Deposit in Appleton Nat. Bank.....		1,337 23
		<u>\$ 96,837 23</u>

## NEW SCHOOL HOUSES SINKING FUND

	Securities	Cash	Total
On hand Jan. 1, 1912. ....	\$ 74,000 00	\$ 1,525 17	\$ 75,525 17
Received during 1912:			
Cash—Annual Appropriation.....		4,000 00	
Income on Investments.....		2,975 80	
Income on Bank Deposits.....		70 40	
Securities Bought in 1912.....	8,000 00		
Securities Matured in 1912. ....		1,000 00	
		<u>\$ 9,570 57</u>	
Paid for Securities in 1912.....		8,060 75	
On hand Jan. 1, 1913.....	\$ 81,000 00	\$ 1,509 82	\$ 82,509 82
Increase during 1912 .....			<u>6,984 65</u>

## Securities belonging to this Fund:

8 City of Indianapolis, coupon bonds, 4 per cent.	8,000 00	
3 C. B. & Q. R.R., coupon bonds, 4 per cent....	3,000 00	
5 Illinois Central R.R., coupon bonds, 4 per cent.	5,000 00	
2 Winona & St. Peter R.R., coupon bonds, 7 per cent.....	2,000 00	
1 N. Y., Lack. & West. R.R., coupon bond, 6 per cent.....	1,000 00	
4 Boston & Maine R.R., coupon bonds, 4 per cent.....	4,000 00	
5 N. Y., N. H. & H. R.R., coupon bonds, 4 per cent.....	5,000 00	
1 City of Minneapolis, reg. bond, 3½ per cent..	10,000 00	
1 City of Lowell, coupon bond, 4 per cent.....	1,000 00	
4 C. B. & Q. R.R., coupon bonds, 4 per cent....	4,000 00	
5 City of Melrose, coupon bonds, 4 per cent....	5,000 00	
5 City of Milwaukee, coupon bonds, 4 per cent..	5,000 00	
1 Chicago & No. West. R.R., reg. bond, 4 per cent ..	5,000 00	
3 Am. Tel. & Tel. Co., coupon bonds, 4 per cent.	3,000 00	
6 Town of Watertown, coupon bonds, 4 per cent.	6,000 00	
1 City of Portsmouth, coupon bonds, 4 per cent.	1,000 00	
2 City of Everett, coupon bonds, 4 per cent.....	2,000 00	
2 City of Lowell, coupon bonds, 4 per cent.....	3 000 00	
5 Boston Elevated R.R., coupon bonds, 5 per cent.....	5,000 00	
3 County of Hillsborough, coupon bonds, 4 per cent.....	3,000 00	
	<hr/>	81,000 00
Cash on Deposit in Appleton Nat. Bank .....		1,509 82
		<hr/>
		\$ 82,509 82
30 City of Lowell, coupon bonds, on hand pur- chased since Jan. 1, 4 per cent.....	\$ 30,000 00	

**CITY DEBT AND INTEREST OF JANUARY 1, 1913  
AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913**

Issued—Year .....	1871	1871	1878	1890	1891	1896
Due—Year.....	Perpetual	Perpetual	Perpetual	1920	1921	1926
To Whom.....	Ministry at Large Worthy Poor	High Street Church Library-S. Sch.	Worthy Poor	Sundry Persons	Sundry Persons	Sundry Persons
Rate.....	6%	6%	6%	4%	4%	4%
Present Amount.....	\$ 25,000 00	\$ 1,000 00	\$ 10,000 00	\$450,000 00	\$150,000 00	\$200,000 00
Annual Payment.....						
Annual Interest.....	1,500 00	60 00	600 00	18,000 00	6,000 00	8,000 00

**CITY DEBT AND INTEREST OF JANUARY 1, 1913**  
**AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued**

Issued—Year .....	1903	1903	1903	1903	1903
Due—Year .....	1913	1913	1913	1913	1913
To Whom .....	Lowell Inst. Savings	Bond & Goodwin Co.	Lowell Inst. Savings	Lowell Inst. Savings	Washington Institution Savings
Rate .....	3 $\frac{5}{8}$ %	4%	3 $\frac{7}{8}$ %	3 9-10%	3 $\frac{7}{8}$ %
Present Amount .....	\$ 9,770 00	\$ 13,500 00	\$ 4,450 00	\$ 2,500 00	\$ 862 00
Annual Payment .....	9,770 00	13,500 00	4,450 00	2,500 00	862 00
Annual Interest .....	177 08	540 00	172 44	97 50	33 40
					29\$ 35

\$ 7,650 00

7,650 00

29\$ 35

Issued—Year .....	1904	1904	1904	1905	1905
Due—Year .....	1914	1914	1914	1915	1915
To Whom.....	Lowell Inst. Savings	Lowell Inst. Savings	Lowell Inst. Savings	Lowell Inst. Savings	Lowell Inst Savings
Rate.....	$3\frac{5}{8}\%$	$3\frac{5}{8}\%$	$3\frac{5}{8}\%$	$3\frac{3}{8}\%$	$3\frac{1}{2}\%$
Present Amount.....	\$ 10,000 00	\$ 15,800 00	\$ 10,580 00	\$ 18,000 00	\$ 21,450 00
Annual Payment.....	5,000 00	7,900 00	5,290 00	6,000 00	7,150 00
Annual Interest.....	271 87	572 75	383 53	506 25	625 62

# CITY DEBT AND INTEREST OF JANUARY 1, 1913

## AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued

Issued—Year .....	1905	1905	1905	1905	1906
Due—Year .....	1915	1915	1915	1915	1916
To Whom.....	Lowell Inst. Savings	Lowell Inst. Savings	Washington Institution Savings	Washington Institution Savings	Lowell Inst. Savings
Rate.....	3 1/8 %	3 1/2 %	3 1/2 %	3 1/2 %	4 %
Present Amount.....	\$ 24,990 00	\$ 23,220 00	\$ 660 00	\$ 3,525 00	\$ 16,000 00
Annual Payment ..	8,330 00	7,740 00	220 00	1,175 00	4,000 00
Annual Interest..	874 65	812 70	23 10	123 37	560 00



Issued—Year ....	1906	1906	1906	1906	1906	1906
Due—Year .....	1916	1916	1916	1916	1916	1916
To Whom.....	Central Savings Bank	Washington Institution Savings	Lowell Institution Savings	Washington Institution Savings	Lowell Institution Savings	Sundry Persons
Rate.....	3½%	4¼%	4¼%	4¼%	4½%	4%
Present Amount..	\$ 1,500 00	\$ 12,664 00	\$ 12,000 00	\$ 6,120 00	\$ 10,680 00	\$ 2,320 00
Annual Payment..	1,500 00	3,166 00	3,000 00	1,530 00	2,670 00	7,100 00
Annual Interest..	52 50	538 22	510 00	260 10	440 55	1,136 00
						92 80

**CITY DEBT AND INTEREST OF JANUARY 1, 1913  
AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued**

Issued—Year .....	1907	1907	1907	1907	1907	1907
Due—Year .....	1917	1917	1917	1917	1917	1917
To Whom.....	Sundry Persons	Sundry Persons	National Life In. Co.	National Life In. Co.	National Life In. Co.	National Life In. Co.
Rate.....	4%	4%	4 $\frac{1}{8}$ %	4 $\frac{1}{8}$ %	4 $\frac{1}{8}$ %	4 $\frac{1}{8}$ %
Present Amount.....	\$ 10,000 00	\$ 5,000 00	\$ 12,500 00	\$ 4,750 00	\$ 6,250 00	\$ 12,500 00
Annual Payment.....	2,000 00	1,000 00	2 500 00	950 00	1,250 00	2,500 00
Annual Interest.....	360 00	180 00	562 50	213 75	281 25	562 50

Issued—Year .....	1907	1907	1907	1907	1907
Due—Year .....	1917	1917	1917	1917	1917
To Whom .....	Washington Savings Institution	Sundry Persons	Sundry Persons	Com Sink- ing Fund	Sundry Persons
Rate.....	$4\frac{1}{8}\%$	$4\frac{1}{8}\%$	$4\frac{1}{2}\%$	$4\frac{1}{2}\%$	$4\frac{3}{4}\%$
Present Amount .....	\$ 2,750 00	\$ 3,000 00	\$ 58,000 00	\$ 1,750 00	\$ 37,500 00
Annual Payment.....	550 00	600 00	11,600 00	150 00	7,500 00
Annual Interest .....	123 75	135 00	2,610 00	33 75	1,781 25

**CITY DEBT AND INTEREST OF JANUARY 1, 1913**  
**AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued**

Issued—Year.....	1907	1908	1908	1908	1908
Due—Year .....	1917	1918	1918	1918	1918
To Whom .....	Sundry Persons	Sundry Persons	Boston Five Cent Savings Bank	Boston Five Cent Savings Bank	Malden Savings Bank
Rate.....	4 $\frac{3}{4}$ %	5%	4%	4%	4%
Present Amount .....	\$ 18,000 00	\$ 10,000 00	\$ 45,000 00	\$ 7,200 00	\$ 11,400 00
Annual Payment.....	3,600 00	2,000 00	7,500 00	1,200 00	1,900 00
Annual Interest .....	855 00	500 00	1,650 00	264 00	418 00
					162 80

Issued—Year.....	1908	1908	1908	1908	1908
Due—Year.....	1918	1918	1918	1918	1918
To Whom .....	Malden Savings Bank	Philip Dexter	Philip Dexter	Philip Dexter	Philip Dexter
Rate.....	4%	4%	4%	4%	4%
Present Amount .....	\$ 12,000 00	\$ 4,380 00	\$ 6,900 00	\$ 4,200 00	\$ 15,000 00
Annual Payment.....	2,000 00	730 00	1,150 00	700 00	2,500 00
Annual Interest.....	440 00	175 20	276 00	168 00	600 00
					84 00

CITY DEBT AND INTEREST OF JANUARY 1, 1913,  
AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued

Issued—Year .....	1908	1909	1909	1909	1909
Due—Year .....	1918	1919	1919	1919	1919
To Whom.....	Boston Five Cent Savings Bank	Blodgett Merritt & Co	Blodgett Merritt & Co.	City Trust Company	Sinking Fund Com.
Rate.....	4%	3½%	4%	4%	4½%
Present Amount.....	\$ 69,000 00	\$ 84,000 00	\$ 35,000 00	\$ 630 00	\$ 1,400 00
Annual Payment .....	11,500 00	12,000 00	5,000 00	90 00	200 00
Annual Interest.....	2,760 00	2,730 00	1,400 00	25 20	59 50

Issued—Year .....	1910	1910	1910	1910	1910	1911
Due—Year .....	1920	1920	1920	1920	1920	1921
To Whom .....	Merrill, Oldham & Co.	Merrill, Oldham & Co.	Old Colony Trust Co.	Old Colony Trust Co.	Perry, Coffin & Burr	Adams & Co.
Rate .....	4%	4%	4%	4%	4%	4%
Present Amount .....	\$ 54,400 00	\$ 40,000 00	\$ 32,320 00	\$ 2,080 00	\$ 16,000 00	\$ 45,000 00
Annual Payment .....	6,800 00	5,000 00	4,040 00	260 00	2,000 00	5,000 00
Annual Interest .....	2,040 00	1,500 00	1,292 80	83 20	640 00	1,700 00



CITY DEBT AND INTEREST OF JANUARY 1, 1913  
AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued

Issued—Year .....	1911	1911	1911	1911	1912
Due—Year .....	1921	1921	1921	1921	1922
To Whom .....	E. H. Rollins	E. H. Rollins	Adams & Co.	Blodgett & Co.	Blake Bros.
Rate .....	4%	4%	4%	4%	4%
Present Amount .....	\$106,650 00	\$ 39,600 00	\$ 21,150 00	\$ 66,105 00	\$ 50,000 00
Annual Payment .....	11,850 00	4,400 00	2,350 00	7,345 00	5,000 00
Annual Interest .....	4,029 00	1,584 00	846 00	2,644 20	1,900 00
					400 00
					\$ 10,000 00
					1,000 00
					400 00

R. L. Day  
& Co.

Issued—Year .....	1912	1912	1912	1912	1912
Due—Year .....	1917	1922	1922	1922	1922
To Whom.....	R. L. Day & Co.	R. L. Day & Co.	R. L. Day & Co.	Merrill, Oldham & Co.	Blodgett & Co.
Rate	4%	4%	4%	4%	4%
Present Amount .....	\$ 18,350 00	\$ 6,500 00	\$ 29,100 00	\$ 21,825 00	\$ 35,000 00
Annual Payment.....	3,670 00	650 00	7,275 00	Due 1917 to 1919	& 1920 to 1926 1,750 00
Annual Interest.....	734 00	260 00	1,164 00	873 00	1,400 00

**CITY DEBT AND INTEREST OF JANUARY 1, 1913**  
**AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913—Continued**

Issued—Year.....	1912	1912	1912	1912
Due—Year .....	1922	1922	1922	1922
To Whom.....	W. L. Raymond & Co.	E. H. Rollins & Sons.	Esterbrook & Co.	Central Savings Bank  Merrill, Oldham & Co.
Rate.....	4%	4%	4%	4%
Present Amount.....	\$ 4,000 00	\$ 22,000 00	\$ 21,825 00	\$248,000 00
Annual Payment ...	400 00	1,100 00	Due 1920 to 1922	24,800 00
Annual Payment.....	160 00	880 00	873 00	9,920 00

City Debt.....	\$ 2,504,776 60		
Payments.....		\$ 303,215 70	
Interest .....		\$ 99,014 02	
Sinking Funds .....			\$ 468,963 65
Total City Debt.....	\$ 2,504,776 60		
Sinking Funds.....	468,963 65		
Total Net Debt.....	\$ 2,035,812 95		

**WATER WORKS DEBT AND INTEREST OF JANUARY 1, 1913  
AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913**

Issued—Year .....	1890	1906	1910	1911	1912
Due—Year .....	1920	1916	1920	1921	
To Whom. ....	Sundry Persons	Lowell Inst. Savings	Adams & Co.	Adams & Co.	W, L. Ray- mond & Co.
Rate .....	4%	4 1/8%	4%	4%	4%
Present Amount.....	\$ 1,000,000 00	\$ 10,800 00	\$ 48,000 00	\$ 90,000 00	\$ 26,250 00
Annual Payment .....		2,700 00	6,000 00	10,000 00	Due 1913 to 1926
					\$ 3,750 00
					Due 1920 to 1926
					3,750 00
Annual Interest.....	40,000 00	445 50	1,920 00	3,600 00	1,050 00

Issued—Year.....	1912	1912	
Due—Year.....			
To Whom.....	Merrill, Oldham & Co.	R. L. Day & Co.	
Rate .....	4%	4%	
Present Amount.....	\$ 22,500 00	\$ 26,250 00	
Annual Payment.....	Due 1927 to 1932	Due 1920 to 1926	
	\$ 3,750 00	\$ 3,750 00	
Annual Interest.....	\$ 900 00	\$ 1,050 00	
Total Water Works Debt .....		\$1,223,800 00	
Total Water Works Annual Payment ....			\$ 22,450 00
Total Water Works Annual Interest .....			
Total Water Works Sinking Fund .....			
Total Water Works Debt .....		\$1,223,800 00	
Sinking Funds .....		625,209 08	
Net Water Debt .....		598,590 92	
			\$ 48,965 50
			\$ 625,209 08

**TEMPORARY LOAN AND INTEREST OF JANUARY 1, 1913  
AND PAYMENTS TO BE MADE DURING YEAR ENDING 1913**

Issued—Year.....	1912	
Due Year .....	1913	
To Whom .....	Curtis & Sanger Blake Bros. Co.	
Rate .....	4%	
Present Amount.....	\$600,000 00	
Annual Payment.....	600,000 00	
Annual Interest .....	24,000 00	



**TEMPORARY LOANS**

The following table shows the Receipts and Payments and Balances by years of this account :

Year	Bal. F'w'd	Borrowed	Paid
1896		600,000 00	425,000 00
1897	175,000 00	1,000,000 00	925,000 00
1898	250,000 00	1,250,000 00	1,075,000 00
1899	425,000 00	1,000,000 00	1,025,000 00
1900	400,000 00	1,000,000 00	925,000 00
1901	475,000 00	925,000 00	900,000 00
1902	500,000 00	1,100,000 00	1,000,000 00
1903	600,000 00	1,200,000 00	1,100,000 00
1904	700,000 00	1,300,000 00	1,200,000 00
1905	800,000 00	1,300,000 00	1,300,000 00
1906	800,000 00	1,300,000 00	1,300,000 00
1907	800,000 00	1,300,000 00	1,300,000 00
1908	800,000 00	1,300,000 00	1,300,000 00
1909	800,000 00	1,200,000 00	1,300,000 00
1910	700,000 00	1,300,000 00	1,300,000 00
1911	700,000 00	1,200,000 00	1,200,000 00
1912	700,000 00	1,200,000 00	1,300,000 00

**OVERLAYS**

1902	10,326 29
1903	58,171 02
1904	22,663 80
1905	24,541 18
1906	34,611 43
1907	2,862 31
1908	10,872 31
1909	4,859 11
1910	11,268 54
1911	4,572 55
1912	26,594 23

**DISTANCE FROM DEBT LIMIT**

1900	183,054 94
1901	237,456 18
1902	332,447 53
1903	244,270 59
1904	272,658 40
1905	178,409 13
1906	235,730 50
1907	172,875 58
1908	213,708 79
1909	360,771 61
1910	494,206 07
1911	487,089 15
1912	344,784 27

**PAYMENTS TO BE MADE TO SINKING FUNDS IN 1913**

City Hall and Memorial Buildings, due 1920....	\$ 7,500 00	\$ 450,000 00
High School, due 1921.....	3,000 00	150,000 00
New School Houses, due 1926.....	4,000 00	200,000 00
Water Loans, due 1920.....	16,000 00	1,000,000 00
	<u>\$35,500 00</u>	<u>\$1,800,000 00</u>

**PROPERTY EXEMPT FROM TAXATION**

	Personal Valuation	Real Estate Valuation	Totals
Literary Institutions.....	\$ 140,846 90	\$ 466,895 00	\$ 607,741 90
Temperance Institutions.....	3,365 85	16,350 00	19,715 85
Benevolent Institutions.....	35,423 62	97,750 00	133,173 62
Charitable Institutions.....	873,222 67	487,440 00	1,360,662 77
Scientific Institutions.....	406,420 29	486,650 00	893,070 29
Houses of Religious Worship..		2,322,750 00	2,322,750 00
	<u>\$1,459,279 43</u>	<u>\$3,877,835 00</u>	<u>\$5,327,114 43</u>

The total real estate area exempt, 115,806.1000 acres.

**LOANS AUTHORIZED BY THE MUNICIPAL COUNCIL 1912**

Sewer Construction.....	10 year.....	\$ 50,000 00
Rifle Range and Fire Houses. ....	10 year.....	10,000 00
Macadamizing Streets.....	10 year.....	18,350 00
City Stables.....	20 year.....	35,000 00
Market Street Bridge.....	10 year.....	6,500 00
Paving Streets. ....	10 year.....	72,750 00
City Library .....	10 year.....	4,000 00
Comfort Station.....	20 year .....	22,000 00
Water Works Improvements.....	20 year.....	75,000 00
Dracut Road Improvements .....	10 year.....	5,100 00
School Department.....	10 year.....	35,000 00
Streets.....	10 year.....	6,000 00
Contagious Diseases.....	10 year.....	7,000 00
General Municipal Purposes .....	10 year.....	200,000 00
		<u>\$546,700 00</u>

# VALUATION OF REAL ESTATE AND PERSONAL PROPERTY WITH TAX RATE

Year	Polls	Personal	Real Estate	Total	Rate	Non-Resident Bank Stock	Grand Total Tax
1890	20,021	\$17,037,462	\$45,316,150	\$62,353,612	\$17 00	\$17,096 24	\$1,117,188 21
1891	20,931	17,535,390	46,552,885	64,088,275	15 60	15,956 07	1,057,638 66
1892	22,689	17,213,834	47,503,470	64,717,304	16 80	17,616 16	1,150,506 87
1893	23,511	18,004,970	50,851,600	68,856,570	16 40	17,397 53	1,193,667 27
1894	23,304	17,046,066	52,044,570	69,091,536	17 40	16,786 71	1,265,587 45
1895	23,735	16,526,492	52,359,240	68,885,732	18 00	17,557 16	1,304,970 34
1896	25,320	15,967,762	53,942,710	69,910,472	15 00	14,941 02	1,114,238 10
1897	25,140	15,709,260	54,680,020	70,389,280	17 40	17,302 47	1,292,355 95
1898	24,526	15,350,323	55,628,980	70,977,303	18 00	17,161 06	1,343,804 51
1899	24,882	15,374,232	55,881,355	71,255,587	19 60	18,366 73	1,469,642 32
1900	25,837	15,497,630	56,031,885	71,529,515	18 80	17,330 59	1,418,759 47
1901	25,059	15,425,843	56,248,745	71,674,588	18 60	16,449 04	1,399,714 38
1902	25,263	15,194,442	56,709,315	71,903,757	19 60	10,974 00	1,470,813 64
1903	24,559	15,178,418	56,825,610	72,004,028	20 40	12,054 30	1,530,054 47
1904	25,555	14,841,767	56,773,140	71,614,907	20 00	11,239 36	1,494,647 50
1905	26,087	14,433,923	57,211,795	71,645,718	20 20	12,522 12	1,511,939 62
1906	25,688	15,392,795	58,932,980	74,325,775	19 60	12,149 35	1,520,310 55
1907	25,181	16,753,821	59,690,910	75,454,738	19 40	12,125 23	1,526,309 15
1908	25,118	17,268,891	60,590,000	77,858,891	20 40	10,196 39	1,648,753 78
1909	26,460	17,880,477	61,296 360	79,695,960	19 60	10,174 81	1,614,960 82
1910	27,196	17,927,358	62,167,445	80,094,803	19 60	10,749 45	1,634,999 61
1911	26,426	18,564,888	63,167,445	82,166,743	18 90	11,456 37	1,617,259 82
1912	25,194	19,400,128 90	65,397,220	84,797,348 90	19 00	11,147 99	1,672,686 62

### LOANS NEGOTIATED BY THE CITY SINCE 1900 AND HOW EXPENDED

Year	Loans	Improvements	Current Expenses	Waterways
1900	\$288,500 00	\$191,000 00	\$ 22,500 00	\$ 75,000 00
1901	258,100 00	206,100 00	50,000 00	
1902	222,885 00	186,385 00	36,500 00	
1903	387,320 00	183,820 00	203,500 00	
1904	254,414 00	167,714 00	86,700 00	
1905	360,150 00	232,150 00	128,000 00	
1906	247,460 00	149,460 00	71,000 00	27,000 00
1907	365,500 09	229,500 00	136,000 00	
1908	304,413 00	189,413 00	115,000 00	
1909	172,900 00	172,900 00	none	
1910	241,000 00	161,000 00	20,000 00	60,000 00
1911	412,450 00	251,450 00	61,000 00	100,000 00
1912*	\$546,700 00	\$230,700 00	\$241,000 00*	\$ 75,000 00

\*Temporary Loan deficiencies of previous years—Schools.

### EXPENDITURE, TAX RATE, VALUATION FROM 1860

Year	Expenditures	Tax Rate	Total City Valuation
1860	\$ 267,192 07	\$ 8 40	\$22,155,176 00
1865	756,342 81	14 60	21,076,360 00
1870	778,636 03	13 90	25,972,488 00
1875	1,162,922 95	16 20	38,690,495 00
1880	1,398,683 48	16 20	41,102,016 00
1885	1,833,483 69	16 00	51,351,780 00
1890	3,613,584 04	17 00	62,353,612 00
1895	2,903,410 60	18 00	68,885,732 00
1900	3,353,844 41	18 80	71,529,515 00
1905	3,788,502 84	20 20	71,645,718 00
1906	3,795,000 75	19 60	74,945,640 00
1907	3,718,874 34	19 40	76,079,750 00
1908	4,046,987 96	20 40	77,858,891 85
1909	3,791,607 95	19 60	79,695,960 00
1910	3,887,399 24	19 60	80,392,890 00
1911	4,073,195 26	18 90	82,772,900 00
1912	\$4,047,482 13	\$19 00	\$85,384,085 00

### Thomas Nesmith Fund

\$25,000 00. Annual Interest, \$1,500 00

Resolution, numbered 57, passed by the City Council, November, 1870 ;  
 "That the sum of \$25,000 00 be accepted by the City and that the interest, at the rate of 6 per cent, be paid to the trustees, and that they in turn pay to the Ministry-at-Large, or to like people, as they may decide. Said sum to be used for people in temporary need of charitable without distinction of race, color or religion. Original trustees: George F. Richardson, John A. Buttrick, Owen Street, Samuel W. Stickney and Charles Hovey. In case of a vacancy, the remaining trustees shall report to the Justice of the Court, who shall appoint a successor to fill said vacancy."

**Carney Medal Fund**

Received of James G. Carney, in 1858 and 1859, the amount of \$200, which is to remain a perpetual debt of the city forever; the interest to be applied in payment for the "Carney Medals" to the departments of the High School (annually).

Balance Jan. 1, 1910.....	\$200 00	
Balance undrawn Dec. 31, 1910. ....		\$200 00
		<hr/> \$200 00

For the information of the citizens of Lowell the Auditor respectfully refers them to the "Annual Report of the School Committee," for the year 1859, where all the correspondence between the donor and the recipient may be found.

**Thomas Nesmith Fund**

\$1,000.00. Annual interest, \$60.00

Resolution numbered 54, passed by the City Council, April, 1870: "That the City of Lowell be appointed trustee of the sum of \$1,000.00, and the City Treasurer is authorized to pay to the High Street Church the interest of said sum at the rate of 6 per cent. for ever. Said sum to be used by the Pastor and Deacons of said Church to sustain the Sunday School and its library for the moral and religious instruction of the children."

**Jonathan Tyler Fund**

\$10,000.00 Annual interest, \$600.00

Resolutions, numbered 14 and 74, passed by the City Council, May, 1878: "That the City of Lowell be appointed trustee of the sum of \$10,000.00 and that the City Treasurer is authorized to pay to the Ministry-at-Large the interest of said sum at the rate of 6 per cent. forever. Said sum to be used for the benefit of the worthy poor of the city. Said Ministry shall make an annual report of their dispensing said money to the City Council."

**Haygood Wright Centennial Trust Fund**

Resolution adopted by the City Council, March 14, 1876: "The sum of \$1,000.00 be accepted from Haygood Wright, under the conditions specified by him, that the money be placed at interest for 50 years and at the end of that time the interest to be spent by the City Council (by a two-third vote) for the benefit of the City or its citizens, but the original \$1,000.00 to be always kept on deposit and the interest only to be spent by the City Council at the end of each 50 years."

Value of fund Jan. 1, 1913.....	\$ 4,467 13
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**PROPERTY OWNED BY THE CITY AND VALUATION OF THE  
SAME (FURNISHED BY DEPARTMENTS) FIGURED IN  
RELATION TO THE CITY DEBT**

**Buildings**

City Hall, granite.....	\$ 410,000 00
Memorial Building, granite.....	200,000 00
Police Station. Stable, City Scales and Public Landing, brick	98,000 00
Lighting Station, Willie Street, wood.....	3,000 00
City Stables, Shed, Board of Health Stables, City Carpenter Shop and other buildings on both sides of Broadway, stone, brick and wood.....	135,000 00
City Hospital and Almshouse, brick and wood.....	200,000 00
Rifle Range, wood.....	16,000 00
	\$1,062,000 00

**Fire Department**

Engine 1, Gorham Street, brick.....	\$ 27,000 00
Engine 2, Branch Street, brick.....	22,000 00
Engine 3, Palmer Street, (Central Fire State) brick.....	90,000 00
Engine 4, High Street, brick.....	24,000 00
Engine 5, Mammoth Road, brick.....	15,500 00
Engine 6, Fletcher Street, brick.....	18,000 00
Hose 7, Central Street, brick.....	13,000 00
Hose 8, Merrimack Street, brick.....	23,000 00
Hose 9, Lincoln Street, wood.....	9,000 00
Hose 10, Fourth Street, brick.....	18,000 00
Hose 11 and Truck 1, Lawrence Street, brick.....	26,000 00
Hose 12 and Truck 4, West Sixth Street, brick.....	38,000 00
Truck 2 and Chemical, Westford Street, brick.....	18,000 00
Protective 1, Warren Street, brick.....	14,000 00
	\$ 355,500 00

**Grammar and High Schools**

High, Kirk and Anne Streets, brick, 20 rooms and hall.....	\$ 250,000 00
High Annex, John and Paige Streets, brick, 16 rooms and drill hall.....	105,000 00
Bartlett (old), Clark Street, brick, 8 rooms.....	25,000 00
Bartlett (new), Wannalancit Street, brick, 16 rooms and hall.	108,000 00

Butler, Gorham Street, brick, 12 rooms and hall.....	\$ 63,000 00
Colburn, Lawrence Street, brick, 8 rooms .....	25,000 00
Edson, Highland Street, brick, 11 rooms .....	25,000 00
Franklin, Branch Street, brick, 8 rooms.....	25,000 00
Green, Merrimack Street, brick, 10 rooms and hall.....	105,000 00
Greenhalge, Ennell Street, brick, 10 rooms and hall.....	75,000 00
Highland, Pine Street, brick, 12 rooms and hall.....	67,000 00
Lincoln, Chelmsford Street, brick, 12 rooms and hall.....	77,000 00
Moody (old), East Merrimack Street, brick, wood ell, 10 rooms.....	20,000 00
Moody (new), Rogers Street, 12 rooms and hall.....	80,000 00
Mann, Broadway, brick, 8 rooms, wood, 12 rooms.....	25,000 00
Pawtucket, Mammoth Road, brick, 8 rooms and hall.....	53,000 00
Riverside, Woburn Street, wood, 8 rooms .....	35,000 00
Varnum, Myrtle Street, brick, 17 rooms and hall.....	110,000 00
Washington, Lang Street, brick, 10 rooms and hall .....	90,000 00
	<hr/>
	\$1,363,000 00

### Primary Schools

Agawam Street, wood, 4 rooms.....	\$ 9,000 00
Ames Street, wood, 4 rooms.....	9,500 00
Billings Street, wood, 4 rooms.....	16,000 00
Central Street, wood, 4 rooms.....	13,500 00
Cross Street, brick, 4 rooms.....	24,000 00
Carter Street, brick, 8 rooms and hall.....	52,000 00
Chapel Street, wood, 2 rooms.....	4,000 00
Cottage Street, wood, 2 rooms.....	4,500 00
Colburn Primary, Charles Street, wood, 7 rooms and hall ...	31,000 00
Charles Street, wood, 4 rooms.....	20,000 00
Cabot Street, brick, 4 rooms.....	23,500 00
Cheever Street, wood, 4 rooms .....	12,000 00
Dover Street, wood, 4 rooms.....	13,500 00
Favor Street, brick, 4 rooms .....	23,000 00
Fayette Street, wood, 2 rooms (unused) .....	3,500 00
Grand Street, wood, 2 rooms .....	5,000 00
Howard Street, brick, 2 rooms.....	5,000 00
High Street, wood, 3 rooms.....	9,000 00
Kirk Street, brick, 2 rooms.....	18,000 00
Lyon Street, brick, 4 rooms .....	20,000 00
Lyon Street Annex, wood, 1 room .....	5,400 00
Lexington Avenue, wood, 2 rooms.....	10,000 00
Lakeview Avenue, wood, 4 rooms.....	8,500 00
London Street, wood, 2 rooms.....	3,000 00
London Street Annex, wood, 2 rooms.....	5,000 00
Mammoth Road, Kindergarten, wood, 1 room .....	4,000 00



Morrill, brick, 4 rooms .....	\$ 19,000 00
Middlesex Village, wood, 4 rooms .....	16,000 00
Moody Street, wood, 6 rooms.....	20,000 00
Oakland, wood, 2 rooms.....	12,000 00
Old Middlesex Village, wood (unused) .....	2,000 00
Plain Street, wood, 6 rooms .....	21,000 00
Powell Street, wood, 2 rooms.....	8,000 00
Pond Street, wood, 2 rooms .....	6,000 00
Pine Street, wood, 4 rooms.....	23,000 00
School Street, wood, 2 rooms (unused) .....	7,500 00
Tenth Street, wood, 4 rooms .....	9,000 00
Worthen Street, wood, 4 rooms.....	25,000 00
Weed Street, wood, 4 rooms.....	10,500 00
West Sixth Street, wood, 4 rooms .....	7,000 00
Total value of real estate.....	<u>\$ 542,900 00</u>

### Park Department

	Acres	
The Rogers Fort Hill Park.....	34.40	\$ 150,000 00
The South Common .....	22.48	200,000 00
The North Common .....	11.39	100,000 00
Tyler Party .....	1.81	8,000 00
Beívidere Park.....	1.77	20,000 00
Mt. Vernon Park.....	0.50	4,350 00
Varnum Park.....	0.135	6,000 00
Monument Square .....	0.092	15,000 00
Penniman Square.....	0.051	450 00
Lincoln Square .....	0.016	200 00
Hovey Square.....	0.010	50 00
Mansur Square .....	0.040	150 00
Water Works Square.....	0.047	500 00
Coburn Square .....	0.252	1,000 00
Hutchinson Square .....	0.037	150 00
Lenox Square .....	0.181	1,500 00
Franklin Square .....	0.058	1,500 00
Princeton Square .....	0.028	150 00
Middlesex Square.....	0.034	200 00
Lincoln Playground .....	1.525	6,000 00
Fayette St. Playground .....	0.170	2,000 00
Varnum Ave., Riverbank ...	0.456	100 00
Colonial Ave. Riverbank.....	3 50	2,000 00
Glacial Oval.....		100 00
City Hall and Memorial Hall Grounds.....	0.50	65,700 00
Lincoln School Grounds.....	1.02	4,445 00
Highland School Grounds .....	1.24	5,392 00

Greenhalge School Grounds .....	2.30	10,000 00
Moody School Grounds .....	1.18	7,684 00
Riverside School Grounds .....	1 05	2,281 00
Shedd Playground .....	56 00	11,200 00
<hr/>		
Total.....	142.272	\$627,502 00

### Miscellaneous Real Estate

Lot of Land on Chelmsford Street.....	\$	5,000
Lot of Land on Fletcher and Bowers Streets .....		20,000
Lot of Land on Tenth Street .....		5,000
Cremator.....		10,000
Rifle Range, Dracut .....		2,700
Harris Land, Dracut, 28 acres.....		600
Parker Land, Dracut, 20 acres.....		1,400
Hildreth Land, Dracut, 17 acres.....		500
Meadow Land, Dracut, 5 acres .....		275
Swan Land, Dracut, 5 acres .....		200
Hamblett Land, Wigginvillle, 2 acres .....		400
Clark Road, Gravel Bank, 3 acres.....		900
<hr/>		
		\$ 46,975

### Personal Property in Charge of Commissioner of Public Safety

#### Mayor:

Furniture, etc., in office .....	\$	800
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#### Health:

Furniture, etc., in office.....		177
Bacteriological Laboratory ..		148
Milk and Vinegar Office.....		860
Horses.....		7,000
Wagons and Sleds.....		6,000
Harnesses .....		1,000
Shop .....		1,500

#### Law:

Furniture, etc., in office.....		500
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#### Police:

Furniture, etc., in offices.....		2,453
Equipment .....		1,375
Stable.....		7,331
Electricians' department .....		24,800

#### State Aid:

Furniture, etc., in office.....		200
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## Charity :

Outdoor Relief.....	4,000
Hospital .....	27,000

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\$ 84,237

**Personal Property in Charge of Commissioner of Finance**

Auditor—Furniture, etc., in office .....	\$ 1,305
Assessors “ .....	1,100
Treasurer “ .....	1,000
City Clerk “ .....	550
Elections “ .....	7,500
Registrars “ .....	85
Supply “ .....	575

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\$ 12,115

**Personal Property in charge of Commissioner of  
Streets and Highways**

## Streets :

Store Room.....	\$ 4,070
Yard .....	14,340
Shop .....	2,000
Stone .....	6,780
Blacksmith Shop .....	890
Tool House .....	568
Dracut Ledge .....	14,700
Horses and Harnesses.....	21,788
Miscellaneous .....	2,200

## Watering Streets :

Carts, etc.....	12,635
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## Sewer :

Office .....	725
Miscellaneous .....	19,850

Lighting Streets .....	10,025
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## Engineer :

Furniture, etc., in office.....	2,560
Tools and Material.....	2,900

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\$ 116,031

**Personal Property in Charge of Commissioner of  
Public Property and Licenses**

**Building :**

Shop and storehouses.....	\$	10,500
Machinery, tools, etc .....		1,270
Hardware .....		140
Lumber .....		500
School furnishings.....		2,000
Elections Property.....		4,150
Coffins, stock and tools.....		250
Stable property.....		3,180
Masons' stock and tools.....		60
Pipers' stock .....		315
Painters' stock and tools and unclassified.....		1,100
Office Property.....		1,000

Cemetery.....		16,000
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License Commission .....		850
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**Park :**

Furniture, etc., in office .....		500
Stable and yard .....		7,700

Smoke Inspector.....		70
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Moths.....		1,800
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**Messenger :**

Furniture in charge.....		1,300
Boiler room.....		3,100

Weigher .....		275
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Sealer ..		900
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Wires.....		400
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**Schools :**

Furniture, etc., in office.....		1,150
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Horses, etc.....		1,000
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Equipment, High School.....		10,000
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Equipment, Industrial School.....		16,000
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**Personal Property in Charge of Commissioner of  
Water Works and Fire Departments**

**Fire :**

Chief's Office.....	\$	7,619 32
Repair Shop.....		579 00
Engine Co. No. 1, Gorham.....		8,767 13
Engine Co. No. 2, Branch.....		9,389 00
Engine Co. No. 3, Palmer.....		7,773 30
Engine Co. No. 4, High.....		5,172 50
Engine Co. No. 5, Pawtucketville.....		2,950 90
Engine Co. No. 6, Fletcher.....		6,592 60
Hose Co. No. 7, Central.....		2,566 95

Hose Co. No. 8, Merrimack .....	2,000 85
Hose Co. No. 9, Lincoln.....	2,539 13
Hose Co. No. 10, Fourth.....	3,955 30
Hose Co. No. 11, Lawrence .....	1,966 60
Hose Co. No. 12, West Sixth .....	2,443 65
Hook & Ladder Co. No. 1, Lawrence.....	2,429 25
Hook & Ladder Co. No. 2, Westford.....	3,517 91
Hook & Ladder Co. No. 3, Palmer.....	5,169 55
Hook & Ladder Co. No. 4, West Sixth.....	6,559 78
Protective Co. No. 1, Warren.....	4,327 70
Fire Alarm Telegraph.....	47,327 00
	<hr/>
	\$ 133,647 45

#### Water Works—Real Estate :

Terminal chamber, gate house (brick) located on Conduit Street right of way .....	\$ 4,000
Two small brick bldgs., manhole and blow off located on Conduit Street right of way.....	1,000
Vacant land "Fels Park" 27163 sq. ft. ....	600
Strip of land Sarah Ave. and Moody Street, 28072 sq. ft.	2,800
Brick manhole structure.....	2,000
Land Moody Street, Gershom Ave. and Gardner Ave., 17,252 sq. ft. ....	2,587
Brick manhole structure.....	1,000
Land White Street, 5833 sq. ft. ....	300
Inlet chamber (brick).....	10,000
Land Varnum Ave., 15,540 sq. ft. ....	1,550
Tract of land between River and Varnum Ave., 166,320 sq. ft. ....	5,000
Filter basin, brick base, wooden superstructure.....	8,000
Lower Pumping Station, hollow tile block structure, (unf.).....	7,000
Wooden buildings.....	500
Land 2½ acres .....	900
Upper Pumping Station, wooden building.....	2,000
1 Dwelling House .....	1,500
1 Dwelling House .....	800
Land 55.78 acres.....	22,300
"Cushing Farm" buildings.....	1,200
Land 33 acres Varnum Ave.....	6,600
Land on Boulevard and Boulevard Street, 11 acres.....	4,400
Pumping Station No. 1, West Sixth Street.....	100,000
Stable and sheds.....	15,000
Store house and sheds.....	2,000
Land West Sixth, Hampshire and Jewett Streets, 51,101 sq ft. ....	12,775

"Supt. Residence" 40 West Sixth Street .....	1,600
Land West Sixth Street, 8133 sq. ft. ....	2,450
High Service Reservoir.....	15,000
Land 54,730 sq. ft. ....	1,100
Land 32,470 sq. ft. (Town of Dracut).....	650
Low Service Reservoir—Gate House .....	10,000
Dwelling House.....	1,000
New Reservoir, low service (unfd.) .....	40,000
Reservoir, low service .....	70,000
Land 651,600 sq. ft. ....	32,600
Pumping Station, Plain and Chelmsford Streets, wooden buildings and chimney.....	3,000
Land Plain and Chelmsford Streets, 1,684,930 sq. ft. ....	25,300
Land Plain and Chelmsford Streets, 115,640 sq. ft. ....	600
Land in Town of Chelmsford, 1,531,109 sq. ft. ....	3,500
	<hr/>
	\$ 422,612 00
Pumps, Engines, Machinery, Pipes, Conduits, Mains and other personal property.....	1,553,276 67
	<hr/>
	\$1,975,888 67

## CITY DEBT

Total Valuation of all Real Estate and Personal Property owned by the City.....	\$ 6,448,703 12
Gross City Debt less Sinking Funds .....	2,633,909 30
	<hr/>
Excess in Valuation of City Property over Gross City Debt..	\$3,814,793 82

## INSURANCE ON CITY PROPERTY

City Hall, Memorial Building, Library, Buildings and Contents.....	\$ 353,000
Boilers .....	260,000
Charity Department.....	45,750
Health Department.....	4,000
Park Department.....	7,000
Rifle Range.....	3,000
Street Department.....	20,000
School Department.....	528,190



# LAND OWNED BY THE CITY FOR BURIAL PURPOSES

Date	Location	Grantee	Area	Price	Grantor
Nov. 5, 1810	School St. †1	Inhabitants of Chelmsford	1 acre 23 rods	23 00	Joel Spaulding
Mar. 31, 1832	Gorham St. †2	136 rods in Chelmsford	4 acres 81 rods	428 00	Simon and Susan Parker
		see below			
Nov. 16, 1846	"	†3	30 acres	1,500 00	William and Hannah Spence
Nov. 25, 1893	"	†3	112,980 sq. feet	4,286 75	Mary and John Gannon
Nov. 15, 1894	"	†3	13,846 "	692 30	William B. Spaulding
Dec. 24, 1894	"	†3	10,527 "	526 35	J. J. Donovan
			137,353 " or		
			3.1 acres		
1893	"	†3	44,139 sq. ft.	(a) 1,800 00	Seven Ohlson
1894	"	†3	88,428 "	" 3,290 00	Charles D. Starbard
1790	"	†3	133,606 "	" 6,056 95	William Manning
			266,173 "		
			or 6.1 acres		
July 20, 1893	"	†3 annex		50 00	Seven Ohlson
1899	"	†3	18,972 acres	5,691 69	Chas. W. and Sarah Swan
Dec. 17, 1877	"	*	7 acres	2,000 00	T. McOwen

†1 is the Cemetery on School Street.

†2 is the old Cemetery on Gorham Street.

†3 is the new Cemetery on Gorham St. known as the Edson Cemetery.

\*January, 1878, \$400 00 was returned to the City on purchase McOwen land, reducing cost to \$1,600 00.

(a) Paid on execution.

## VALUATION

School Street.....	\$ 8,000 00
Gorham Street .....	35,000 00
	————— \$43,000 00



# CITY OF LOWELL

## Order, to Meet Fixed Charges and Current Expenses of the City of Lowell, for the Year 1912

*Ordered by the Municipal Council of the City of Lowell as follows :*

That the following sums amounting to One Million, Eight Hundred Seventy Nine Thousand, Four Hundred and Forty Five Dollars and Twenty Cents (\$1,879,445.20) be and are hereby appropriated for Fixed Charges and Current Expenses of the City of Lowell for the year beginning January 1, 1912 and ending December 31, 1912.

The purpose of this order is to enable the City of Lowell to make immediate provision for the maintenance of its public departments, which otherwise would be without funds essential thereto, and this order is of urgent necessity for the immediate preservation of the peace, health and safety.

February 29, 1912.

### APPROPRIATION BUDGET 1912

Amount to be raised by taxation. ....	\$1,410,100 00
Estimated department revenue.....	470,300 00
	<u>\$1,880,400 00</u>
Appropriated for departments.....	\$1,430,146 00
Fixed charges .....	449,299 20
	<u>\$1,879,445 20</u>
Total estimated revenue.....	\$1,880,400 00
Total appropriations.....	1,879,445 20
	<u>\$ 954 80</u>
Commissioner of Public Safety.....	\$ 362,265 00
“ Finance.....	56,740 00
“ Streets and Highways.....	268,500 00
“ Water Works and Fire Protection.....	191,755 00
“ Public Property and Licenses.....	136,936 00
Municipal Council.....	413,950 00
	<u>\$1,430,146 00</u>

## DEPARTMENT OF PUBLIC SAFETY

Mayor :		
Salaries .....	\$ 4,200 00	
Other expenses.....	700 00	
		4,900 00
Charity:		
O. D. Relief.....	\$ 6,640 00	
Salaries and wages.....		
Other expenses.....	26,360 00	
		33,000 00
Hospital:		
Salaries and wages.....	\$ 12,174 50	
Other expenses.....	37,825 50	
		50,000 00
Fish Warden.....		100 00
Health :		
Office salaries .....	\$ 10,576 00	
Other expenses.....	6,558 35	
		17,128 35
Yard wages.....	\$ 39,324 59	
Other expenses.....	11,214 40	
		50,538 99
Milk inspection :		
Salaries.....	\$ 2,202 00	
Other expenses.....	330 66	
		2,532 66
Inspection Schools.....		800 00
Law :		
Salaries .....	\$ 4,376 00	
Other expenses.....	874 00	
		5,250 00
Pound Keeper.....		5 00
Police:		
Salaries and wages.....	\$139,287 75	
Pensions.....	8,289 00	
Other expenses.....	5,423 25	
		153,000 00
Soldiers' Benefit :		
Military aid .....	\$ 3,200 00	
Soldiers' relief.....	18,200 00	
State aid.....	16,500 00	
State aid office .....	2,100 00	
		40,000 00
Inspector of Animals:		
Salary .....	\$ 500 00	
Other expenses.....	10 00	
		510 00
Insurance.....		4,500 00
Total.....		<u>\$362,265 00</u>

## DEPARTMENT OF FINANCE

Auditor :		
Salaries.....	\$ 4,100 00	
Other expenses.....	1,900 00	
	<hr/>	\$ 6,000 00
Assessors :		
Salaries.....	\$ 13,070 00	
Other expenses.....	1,430 00	
	<hr/>	14,500 00
Treasurer :		
Salaries.....	\$ 9,112 00	
Other expenses.....	2,388 00	
	<hr/>	11,500 00
City Clerk :		
Salaries.....	\$ 6,017 67	
Other expenses.....	1,282 33	
	<hr/>	7,300 00
Elections :		
Wages .....	\$ 3,240 00	
Other expenses.....	3,560 00	
	<hr/>	6,800 00
Registrars :		
Salaries.....	\$ 2,700 00	
Other expenses.....	1,300 00	
	<hr/>	4,000 00
Supply :		
Salaries.....	\$ 5,251 50	
Other expenses.....	1,388 50	
	<hr/>	6,640 00
Total.....		<hr/>
		\$ 50,740 00

## DEPARTMENT OF STREETS AND HIGHWAYS

## Streets:

Salaries and wages.....	\$ 115,000 00	
Other expenses.....	25,000 00	
		\$ 140,000 00

## Street Watering:

Wages .....	\$ 5,000 00	
Other expenses.....	14,000 00	
		19,000 00
*Street Lighting .....		85,000 00

## Sewer Maintenance:

Wages .....	\$ 14,000 00	
Other expenses.....	4,000 00	
		18,000 00

## Engineer:

Salaries.....	\$ 6,100 00	
Other expenses.....	400 00	
		6,500 00

Total .....		<u>\$ 268,500 00</u>
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\* Gas lighting for the year 1912.

\* Electric lighting to September 15, 1912, as per contract.

## DEPARTMENT OF WATER WORKS AND FIRE PROTECTION

## Fire:

Salaries and wages.....	\$ 164,985 56	
Other expenses.....	26,769 44	
		\$ 191,755 00

## \*Water Works:

Salaries and wages.....		
Other expenses.....		
		<u>All receipts</u>
		<u>\$ 191,755 00</u>

\* It was voted that the Commissioner be allowed all receipts.

## DEPARTMENT OF PUBLIC PROPERTY AND LICENSES

## Buildings:

Salaries and wages.....	\$ 14,000 00	
Other expenses.....	7,000 00	
	<hr/>	\$ 21,000 00

## Cemetery:

Salaries and wages.....	\$ 6,326 00	
Other expenses.....	1,674 00	
	<hr/>	8,000 00

Liquor licenses .....		35,900 00
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## Messenger:

Salaries and wages.....	\$ 11,086 00	
Other expenses.....	6,914 00	
	<hr/>	18,000 00

## Moth:

Wages.....	\$ 8,000 00	
Other expenses.....	500 00	
	<hr/>	8,500 00

## Smoke Inspector:

Salary.....	\$ 300 00	
Other expenses.....	100 00	
	<hr/>	400 00

## Rifle Range:

Wages.....	\$ 628 00	
Other expenses.....	372 00	
	<hr/>	1,000 00

## Sealer:

Salaries.....	\$ 1,980 00	
Other expenses.....	320 00	
	<hr/>	2,300 00

## Weigher:

Salary.....	\$ 800 00	
Other expenses.....	10 00	
	<hr/>	810 00

## Wires:

Salaries .....	\$ 2,226 00	
Other expenses.....	300 00	
	<hr/>	2,526 00

## School Houses:

Wages .....	\$ 12,000 00	
Other expenses.....	9,000 00	
	<hr/>	21,000 00

## Park:

Salaries and wages.....	\$ 9,000 00	
Other expenses .....	3,000 00	
	<hr/>	12,000 00

### Department of Public Property and Licenses—Continued

Care of trees.....	\$ 500 00
Playground.....	1,000 00
License Commission:	
Salaries.....	\$ 3,800 00
Other expenses.....	200 00
	<u>4,000 00</u>
	<u>\$ 136,936 00</u>

### EDUCATION

Schools.....	\$ 385,000 00
Library.....	14,500 00

### MUNICIPAL COUNCIL UNCLASSIFIED

Commissioners' salaries.....	10,000 00
Other expenses.....	2,400 00
Memorial Day, G. A. R. ....	1,000 00
Memorial Day, S. W. V. ,.....	350 00
Band concerts .....	700 00
General fund.....	954 80
	<u>\$ 414,904 80</u>

### FIXED CHARGES

City debt.....	\$ 278,799 20
Interest .....	140,000 00
Sinking funds.....	30,500 00
	<u>\$ 449,299 20</u>

Signed

JAMES O'DONNELL, Mayor	} Municipal Council
JAMES E. DONNELLY	
ANDREW E. BARRETT	

## CITY OF LOWELL

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### **Order to Assess Taxes for the Year Nineteen Hundred Twelve (1912)**

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*Ordered—*

That the Board of Assessors of the City of Lowell be and are hereby instructed to raise the sum of One Million, Four Hundred Ten Thousand, One Hundred Dollars (1,410,100.00), by assessment upon Polls and Estates of the inhabitants of the City of Lowell, and Estates of non-residents proprietors, according to law, to defray the current expenses of the City for the fiscal year beginning January 1, 1912, and ending December 31, 1912.

That interest at the rate of six per centum per annum shall be charged on all taxes under this order which remain unpaid on and after the twentieth day of October, 1912, until same shall be paid, and such interest shall be added to and considered a part of said taxes.

That a copy of this order shall be furnished the Board of Assessors by the City Clerk after the approval of the same.

February 29, 1912.



**APPROPRIATIONS — LIMIT**

The limit of appropriations for current expenses for the year 1913, being at the rate of \$12 00 on the \$1,000 00, of the average valuation of the last three years, minus net abatements, and that average valuation being \$81,982,434 66 it follows that the limit of appropriation for the year 1913 is \$983,789 22

**LIMIT OF DEPARTMENT APPROPRIATIONS FOR 1913**

Tax Revenue .....	\$ 983,789 22
Department Revenue .....	463,000 00
	<hr/>
	\$1,446,789 22
Fixed Charges:	
City Debt .....	\$303,215 70
Interest .....	133,000 00
Sinking Funds .....	30,500 00
	<hr/>
	471,715 70
	<hr/>
	\$1,918,504 92

The limit of municipal debt being two and a half per cent of the average valuation of the last three years, minus net abatements, the Board of Assessors respectfully submits that the said average valuation is \$81,982,434 66 and two and a half per cent of that figure would be the amount of the municipal debt..... \$2,049,560 87

**TAXES DUE THE CITY JANUARY 1, 1913**

1899 .....	\$ 492 98
1910 .....	16,812 49
1911 .....	188,050 00
1912 .....	422,993 18
	<hr/>
	\$628,348 65

## ASSESSORS' DEPARTMENT

November 11th, 1912

CHARLES D. PAIGE, ESQ.

City Auditor

Dear Sir :-

You are hereby notified that the Board of Assessors at meetings held Sept. 20th and Sept. 27th abated the the uncollected taxes of the years 1901 to 1909 inclusive, as follows :

1901	\$ 15,740 38		\$ 15,741 07
1902	18,022 03		18,022 03
1903	14,060 89	(\$2 00 abated Jan, 25, 1912)	14,062 89
1904	13,455 90		13,455 90
1905	13,364 50		13,364 50
1906	14,271 90		14,271 90
1907	14,507 13		14,570 13
1908	13,033 39		13,033 39
1909	14,445 15	(\$6 00 abated)	
		(\$4 00 Mar 15th)	
		( 2 00 Apr. 3rd, 1912)	14,451 09
<hr/>			<hr/>
\$130,964 27	\$8 00	Total amount abated 1912)	\$130,972 90
<hr/>			<hr/>

Very truly yours,

BOARD of ASSESSORS

by (signed) WM. J. REARDON

Secretary.

# **ASSESSORS' REPORT FOR YEAR 1912** **PERTAINING TO THE CLOSING OF THE TAX ACCOUNTS FOR THE YEAR 1912**

	Number		Tax
Polls at time of commitment.....	24,652	@ \$2 00	\$ 49,304 00
Supplementary Polls.....	542	" "	1,084 00
Total Number of Polls.....	25,194	" "	\$ 50,388 00
			<u>\$ 50,388 00</u>

## **PROPERTY VALUATION AND TAX**

	Valuation	Tax
Personal Valuation at time of commitment.....	\$ 19,297,428 90	@ \$19 00 \$ 366,651 15
Supplementary Personal Valuation in December....	102,700 00	" " 1,951 30
Total Personal Valuation in 1912.....	\$ 19,400,128 90	" " \$ 368,602 45
Real Estate Valuation at time of commitment .....	\$ 65,397,220 00	
Supplementary Real Estate Valuation in Dec.....	none	
Total Real Estate Valuation in 1912.....	\$ 65,397,220 00	" " 1,242,547 18
Total City Valuation and Tax on Same.....	\$ 84,797,348 90	\$1,611,149 63 \$ 1,611,149 63
Total City Tax for the year 1912.....		\$ 1,661,537 63
Non-resident Bank Shares Valuation .....	586,736 10	" " 11,147 99
Grand Total Valuation and Tax on same....	\$ 85,384,085 00	" " \$1,622,297 62
	<u>GRAND TOTAL TAX</u>	<u>\$ 1,672,685 62</u>

# TAX LEVY

City Appropriations.....	\$ 1,410,100 00
Lowell Textile School Appropriation .....	9,000 00
State Tax .....	137,187 50
State Highway Tax.....	115 00
County Tax.....	75,505 60
Tax up to Overlayings.....	\$ 1,631,908 10
Overlayings.....	26,594 23
Supplementary Taxes.....	3,035 30
Total City Tax for 1912.....	\$ 1,661,537 63
Non-resident Bank Tax .....	11,147 99
Grand Total of the Taxes of year 1912.....	\$ 1,672,685 62
Excise Tax, Bay State Street Railway Co.....	\$ 10,098 37
Street Watering Assessment .....	21,284 61
Moth Assessment .....	\$ 3,439 09

# SUMMARY OF ABATEMENTS OF TAXES MADE IN THE YEAR 1912

Year	Gross Abatements	Reassessments	Net Totals Reassessment Deducted Before Payment	After Payment	Net Totals Reassessments Deducted
1901 .....	\$ 15,741 07		\$ 15,741 07		\$ 15,741 07
1902 .....	18,022 03		18,022 03		18,022 03
1903 .....	14,062 89		14,062 89		14,062 89
1904 .....	13,455 90		13,455 90		13,455 90
1905 .....	13,364 50		13,364 50		13,364 50
1906 .....	14,271 90		14,271 90		14,271 90
1907 .....	14,570 13		14,570 13		14,570 13
1908 .....	13,033 39		13,033 39		13,033 39
1909 .....	14,451 09		14,451 09		14,451 09
1910 .....	625 63	235 20	387 45	2 98	390 43
1911 .....	2,777 14	896 33	1,800 27	80 54	1,880 81
1912 .....	7,204 23	942 40	6,176 33	85 50	6,261 83
Totals.....	\$141,579 90	\$2,073 93	\$139,336 95	\$169 02	\$139,505 97

# ABATEMENTS OF STREET WATERING ASSESSMENTS

Year	Gross Abatements	Reassessments	Net Abatements	Before Payment	After Payment
1908 .....	24		24	24	
1909 .....	4 03		4 03	4 03	
1910 .....	10 35	6 00	4 35	10 35	
1911 .....	14 04	11 08	2 96	14 04	
1912 .....	14 45	14 45		14 45	
Totals.....	\$ 43 11	\$ 31 53	\$ 11 58	\$ 43 11	

# ABATEMENTS OF MOTH ASSESSMENTS

Year	Gross Abatements	Reassessments	Net Abatements	Before Payment	After Payment
1908 .....	1 25		1 25	1 25	
1909 .....	6 45		6 45	6 45	
1910 .....	1 85		1 85	1 85	
1911 .....	11 40	45	10 95	11 40	
1912 .....	2 30	1 85	45	2 30	
Totals.....	\$ 23 25	\$ 2 30	\$ 20 95	\$ 23 25	





## AN ORDINANCE

### Prescribing Methods of Accounting and Defining the Duties of the City Auditor and City Treasurer

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*Be it Ordained by the Municipal Council of the City of Lowell as follows :*

**OCTOBER, 1912**

SECTION 1. The financial year shall begin on the first day of January and end on the thirty-first day of the following December, including both days.

#### **Bookkeeping**

SECTION 2. The City Auditor shall be the general accountant for the city. He shall keep a complete set of books and accounts which shall comprise all of the financial transactions of the city through the various departments under their respective appropriations (in accordance, so far as practicable, with the distribution of accounts provided by the municipal schedules of the United States Census Office for cities of the size of Lowell) All transactions relating to the "Revenue" and to the "Expense" of the current year shall be separated from transactions pertaining to other years, and from transactions relating to loans, construction, purchases or sales of land and other "Capital" accounts of the city.

#### **Monthly Reports**

SECTION 3. The books shall be kept by the City Auditor in double entry, with monthly trial balances of the ledger accounts.

#### **Overdrafts**

SECTION 4. Whenever any appropriation shall have been expended, or whenever, in the judgment of the City Auditor, it is evident that the liabilities incurred against any appropriation by a department or official are in excess of the previous unexpended balance of that appropriation, he shall make a full report thereon at the next meeting of the Municipal Council.

#### **Claims**

SECTION 5. The City Auditor shall receive all bills and accounts from persons having claims against the city, examine the same in detail, and, when satisfied of their correctness and validity, certify the same for the approval of the Municipal Council.

### **Doubtful Claims**

SECTION 6. If the City Auditor shall have any doubt concerning the validity or justice of any account or bill presented to him, he shall refer the same, with his objections thereto, to the Municipal Council for their decision thereon, and if said Municipal Council shall allow any such bill or account he shall certify the same as having been allowed by them.

### **Contracts**

SECTION 7. Whenever a contract is made by any commissioner of the city government, or by any committees or commission appointed by the Municipal Council, for work to be done, or articles and materials furnished for the City, such a commissioner, committee or commission shall deposit with the City Auditor a certified copy thereof, before any payment shall be made thereon; to the end that the City Auditor may see that the payments are made in accordance with the terms of the contract.

### **Contracts Allowed**

SECTION 8. The City Auditor, whenever a claim against the city is allowed by the Municipal Council, shall charge the same to the proper appropriation, and make his draft upon the City Treasurer in favor of such person or order, which draft shall state to what appropriation the City Auditor has charged such draft.

### **Judgments**

SECTION 9. The City Auditor is hereby directed to draw upon the City Treasurer for the payment of any final judgment of court, or any amount determined upon and adjusted by the Municipal Council, and any city note, bond, coupon or interest which now is, or shall hereafter become due and payable, shall be paid by the Treasurer out of any money which may be in the treasury, appropriated or not appropriated, at the time such judgment, adjustment of claim or pending suit, note, bond, coupon or interest shall become due.

### **Accounts Receivable**

SECTION 10. The City Auditor shall open an account with the City Treasurer, wherein the City Treasurer shall be charged with the amount of taxes placed in his hands for collection, and the amount in detail of all bonds, notes, mortgages, leases, rents, interest and all other sums receivable, in order that the value and description of all personal property belonging to the city may be known at any time at the office of the City Auditor.

### **Pay Rolls**

SECTION 11. The City Auditor is hereby authorized to allow for payment all pay rolls for wages required to be paid weekly; and for all salaries fixed by ordinance, and all officers in charge of departments shall make up pay rolls of all employees in their departments required to be paid weekly, as aforesaid, and shall deliver said pay rolls to the City Auditor on such

day as he shall designate ; and as soon as any pay roll has been examined and allowed by the City Auditor, he shall immediately draw his draft upon the City Treasurer for payment, and when said pay rolls are paid in full, they shall be returned to the City Auditor for his file.

### **Payments**

SECTION 12. No money shall be paid out of the city treasury, except upon an order or resolution of the Municipal Council ; provided, however, that any sum of money appropriated, and set apart by the Municipal Council to be paid or applied toward the interest or principal of any note or bond of the city of Lowell, may be so paid upon a draft of the Commissioner of Finance, countersigned by the Auditor, without any action of the Municipal Council ; and provided, further, that, in all cases, interest coupons on any bond issued by the city may be paid upon a draft of the Commissioner of Finance, countersigned by the Auditor ; and provided, further, that, when any legal proceedings are pending in which the city of Lowell is a party, and in which it is necessary for the city to pay money in advance to the witnesses, such money may be paid to the City Solicitor by the City Treasurer, upon the written order of the Municipal Council.

### **Collection**

SECTION 13. The City Treasurer shall demand payment in writing of all accounts due the city ; and in case any such accounts remain unpaid at the expiration of two months after such demand, the City Treasurer shall report the same to the City Solicitor, who shall resort to the proper legal methods for collection.

### **Cemeteries**

SECTION 14. The City Treasurer shall receive and have the care and custody of all sums of money paid by persons for the perpetual care of lots in any of the city cemeteries, give the vouchers of the city therefor, and moneys so received shall constitute a special fund to be known as the Cemetery Fund for Perpetual Care of Lots. He shall invest the money of this fund in securities in which by law, the funds of savings banks may be invested, and pay the amount of interest realized thereon into the city treasury, and he shall notify, when occasion requires, the Commissioner of Public Property and Licenses of all such payments so made on account of lots and graves, together with description of said lots and graves on account of which such payments are made. He shall annually, or at such times as the Commissioner of Public Property and Licenses shall request, pay over to the commissioner the amount of interest received by him from the investment of said moneys.

### **Approvals**

SECTION 15. No money shall be paid out of the city treasury, except in the cases provided in this chapter, unless the expenditures or the terms of the contract shall be vouched for by the head of the department and com-

missioner under whose authority the same has been authorized and made, nor unless the same shall have been examined by the City Auditor and approved by the Municipal Council.

### **Uncollected Bills**

SECTION 16. Upon application, the City Treasurer shall furnish the City Auditor with a certificate of the amount of all bills uncollected, with a statements of the accounts to which they are to be credited when paid; and all officers and departments, when so requested by the City Auditor, shall furnish a statement in detail of all accounts deposited with the City Treasurer for collection.

### **Authorizations**

SECTION 17. Before the issuing of any order on the Treasurer for the payment of any money from the city treasury on any resolution, ordinance order or vote of the Municipal Council, a certified copy of the original resolution, ordinance, order or vote, authorizing or directing such payment and bearing the official signature of the City Clerk, shall be filed with the City Auditor and City Treasurer.

### **Debts**

SECTION 18. The City Treasurer shall cause to be prepared a register of the number, date, amount, day of payment and rate of interest of every city note, bond or other obligation now outstanding, which register shall be placed in the custody of the City Auditor; and whenever any note, bond or other obligation of the city shall hereafter be issued, the City Treasurer shall present the same to the City Auditor, who shall record in said register all the particulars above stated, and shall certify, upon said note, bond or obligation, that it has been duly registered; and whenever any city note, bond or other obligation shall be paid or cancelled, the City Treasurer shall immediately exhibit the same to the City Auditor, who shall thereupon record in said register that such payment or cancellation has been made; and any person shall have a right to inspect said register of the city debt.

### **Manifests**

SECTION 19. All officers and departments required to deposit bills with the City Treasurer for collection, or to issue licenses upon the payment of fees to the City Treasurer, shall file with the City Auditor a certificate of the total amount of all bills to be deposited and of licenses so issued, with a statement of the accounts to which the same should be credited when paid.

### **Certificates**

SECTION 20. All officers and departments required by law to pay fees or moneys received by them to the City Treasurer shall file with the City Auditor certificates of the amounts to be paid to the City Treasurer with a statement of the sources from which said fees or moneys were received.



### **Taxes**

SECTION 21. The Assessors of Taxes shall file with the City Auditor certificates of the amount of all taxes assessed by them whenever the same shall be certified to the City Treasurer for collection.

### **Abatements**

SECTION 22. Upon the abatement of any unpaid tax or taxes, the Board of Assessors shall make duplicate certificates thereof, and of the amounts so abated, and shall thereupon deliver one of said certificates to the City Treasurer as collector of taxes, who has in his hands, for collection, the tax or taxes so abated, and one to the City Auditor, and the sum or sums so abated and certified shall be credited to said Treasurer in the settlements of his accounts.

### **Refunds**

SECTION 23. If an abated tax has been previously paid into the city treasury, a like certificate from the Board of Assessors to the City Auditor shall be a sufficient warrant for the City Auditor to draw his order on the City Treasurer for the amount so abated and certified, to the person in whose favor said certificate shall be drawn.

### **Wardens**

SECTION 24. Before any bill for the compensation of any warden or ward clerk shall be audited for payment, the City Clerk shall approve the payment on a pay roll.

### **Outstandings**

SECTION 25. Every city official shall present to the City Auditor on or before the tenth day of January in each year, certified accounts of all sums due and unpaid for services rendered or labor performed by them, or under their direction, or for materials furnished, for or on account of the city during the fiscal year ending on the thirty-first day of December.

### **Uncompleted Contracts**

SECTION 26. Departments shall present to the City Auditor on the tenth day of January, in each year, a statement of all incomplected contracts made by them, with the probable amounts to become due thereunder, as near as the same can be obtained or ascertained, and also a statement of any purchases made by them for or on account of the city, for which no account has been rendered, together with the reasons for the neglect to present said statement.

### **Bills**

SECTION 27. All bills for labor, material, also assessments, except taxes, shall be made in triplicate form, the original and duplicate to be left with the City Auditor with a list of the same (bill books and lists to be furnished by the Commissioner of Finance), the triplicate to be retained by the

department issuing the bill. The City Auditor shall record such bills and give them to the City Treasurer and charge him with the collection of same.

### **Receipts**

SECTION 28. No official or employee of any department shall give a receipt to any person or persons for money collected. All accounts must be paid to the treasury department, as the City Treasurer and City Collector is only authorized person to receive money for the city. All bills paid the city must have the stamp of that department.

### **Requisitions**

SECTION 29. All requisitions for materials and supplies must be presented to the Auditor's Department for approval before the final order is given to furnish the same, said requisition to show the total amount of the contract and the departments to be supplied. No requisition shall be approved by the Auditor unless the appropriation is sufficient to cover the same.

### **Estimates**

SECTION 30. At the beginning of each municipal year, and not later than the third Tuesday in January, the Municipal Council shall make and transmit to the Mayor an estimate of the expenditures required for the current year. Such estimate shall be framed and itemized so as to show separately the amounts required by each department, office, board, commission or other sub divisions of the government, and so far as may be practicable for the sub-divisions of the work of each department.

The salary or compensation of each officer, deputy, assistant, clerk, or employee of the city not classed as a laborer. The amounts required for labor shall, when practicable, be stated separately from those for materials and supplies.

Such estimates shall be in such form as to show in parallel columns, opposite each item, the amount paid for the previous year, and the amount unexpended at the close of such year.

The City Auditor shall transmit an itemized estimate of the revenues of the year from all sources, except taxation of real and personal property and polls, and and a statement of the balance unpaid at the close of the previous year on account of temporary loans, and the amount due by financial years, as unpaid taxes on real and personal property and polls and other revenues; an itemized statement of the debt, with interest becoming due during the year, and the margin available for loans within the debt limit for the year; an itemized statement of all orders, etc., of the Municipal Council, involving expenditures which have not been appropriated for. In all cases, the finances of the water service shall be shown separately.

### **Appropriations**

SECTION 31. All regular annual appropriations shall be for and only applicable to the liabilities incurred during the year in which they are made.

It shall be the duty of the City Auditor to close all regular annual appropriation accounts with the last secular day in December for the year for which the appropriations are made, and to credit the general treasury fund account or accounts with the balance to the credit of such appropriations; and thereafter, no payment shall be made under such appropriations. He shall promptly report to the Municipal Council the amount of each balance thus credited, and amount available in the general treasury fund, for the expenditures of the current year not otherwise appropriated.

All claims, accounts and bills against the City of Lowell under such appropriations remaining unpaid at such date, shall be numbered consecutively, and be entered by the City Auditor in such order, in a permanent book of record, to be known as a register of claims, so as to show the name of the claimant, the amount claimed and allowed, the nature of the service, and the action had thereon. The Auditor shall transmit to the Municipal Council, on or before the first regular meeting night in February, a schedule of such claims with a condensed statement of the nature of each claim, and the action had thereon.

The several estimates and statements called for by this ordinance shall, on their receipt by the Mayor, be referred to the Auditor (who shall serve as clerk for the Municipal Council in making the appropriations), to be verified and printed for the Municipal Council.

The Municipal Council shall have access to all or any of the records and official papers of the city, shall have power to require from any officer of the city such additional statement or statements relating to the expenditures and revenues of the city as it may deem essential, and summon any officer or employee of the city to be present at any designated meeting of said Municipal Council.

All departments and offices of the city government shall keep and furnish such records, in book form or otherwise, as shall be prescribed by the City Treasurer and City Auditor.

That each department, and officers receiving money for the city, shall remit to the City Treasurer, once a week, all moneys that may be in the possession of such departments or officers belonging to the city, except in such cases where the time for payment to the City Treasurer is prescribed by statute.

That all bills rendered the city through the various departments shall be presented direct to and examined by the commissioners in charge of the respective departments by which such bills were contracted, and, if found correct, shall be approved by them over their own signatures; that they shall be secured in wrappers of a uniform width and length, which wrappers shall be properly backed in their own respective departments, after which all the bills, as approved and wrapped, shall be delivered to the City Auditor's office not later than the eighth day of each month, accompanied by a list of the bills and the total amount of the same. To insure uniformity in the wrappers, they shall be furnished by the City Auditor's office.

That the bills, as received by the City Auditor, shall be examined and corrected, and, after been approved, shall be presented to the Municipal



Council for approval. The bills shall be retained by the City Auditor, who shall issue orders to the City Treasurer for the payment of the same to persons to whom moneys are due.

That all blanks for pay rolls shall be made on single sheets of uniform length and width, and, to insure uniformity in all respects, the blanks shall be in such form as may be approved by the City Auditor; that all pay rolls shall be approved by the commissioner in charge and transmitted unfolded to the City Auditor; that they shall be examined and approved by the City Auditor and then transmitted to the City Treasurer for payment. After payments have been made, the pay rolls shall be returned to the City Auditor, to be filed by him in book form, consecutively by audits.

That in future all amounts due on bills or pay rolls shall be turned back to the credit of the department from which the money was drawn at such time as may be agreed upon by the City Treasurer and City Auditor.

That the payment for bills against the city shall be on the fifteenth day of each month.

### **Annual Reports**

SECTION 32. The City Auditor shall, in each year as soon as possible, present to the Municipal Council a printed report of the receipts and expenditures of the preceding fiscal year, giving in detail the amount of appropriations and expenditures for each specific object.

### **Real Estate, Etc.**

SECTION 33. The City Auditor shall annually present to the Municipal Council a schedule of all the real estate of the city, also a summary of the inventories of departments, giving the valuation of all the personal property belonging to the city which may be in the custody of any officer or agent of the city; and for this purpose, every officer of the city, or other person in whose control or custody any such property may be, is hereby required to present to the City Auditor, on or before the first Monday in February in each year, a detailed inventory of all such property, giving the items and valuation thereof.

### **Committee on Accounts**

SECTION 34. The Municipal Council shall meet each month before the tenth day and examine, and, if they see fit, pass all bills and accounts against the city, which shall be certified by the City Auditor.

SECTION 35. The following ordinances are hereby repealed: "Accounts, finance and expenditures, Chapter 1, 1894; Auditor of Accounts, Chapter 2, 1894; City Treasurer, Chapter 9, 1894; Providing for estimates for appropriations and for other purposes, 1898; Treasurer to prescribe bookkeeping, 1906; Auditor and Treasurer to prescribe bookkeeping, 1908," and all ordinances or parts of ordinances inconsistent herewith are hereby repealed.

This ordinance shall take effect as provided by law.

## [CHAP. 520.]

AN ACT TO PROVIDE THAT ALL PAY ROLLS, BILLS AND ACCOUNTS FOR COMPENSATION OF PERSONS IN THE SERVICE OF ANY CITY OTHER THAN BOSTON SHALL BE VERIFIED BY OATH.

*Be it enacted, etc., as follows :*

SECTION 1. It shall be unlawful for the treasurer or other fiscal officer of any city other than Boston to pay any salary or compensation to any person in the service or employment of the city unless the pay roll, bill or account for such salary or compensation shall be sworn to by the head of the department or by the person who is immediately responsible for the appointment, employment, promotion or transfer of the persons named therein.

SECTION 2. Every such pay roll, bill or account shall contain the following information :— First, full name of each employee ; second, title of his office, or specific nature of the labor that he was originally engaged to perform ; third, kind of work in which he has actually been engaged since the submission of the last previous pay roll ; fourth, salary, wages, or other compensation ; fifth, date or dates of employment.

SECTION 3. Each appointing, employing or other officer, or, in case of a board, each member thereof, who willfully refuses or neglects to comply with any provision of this act shall be punishable by a fine of not less than twenty-five no more than one hundred dollars for each offence. [*Approved April 21, 1913.*]

## [CHAP. 669.]

AN ACT RELATIVE TO THE APPROVAL OF BILLS AGAINST CITIES AND TOWNS.

*Be it enacted, etc., as follows :*

SECTION 1. All accounts rendered to or kept in the departments of any city shall be subject to the inspection of the city auditor or officer having similar duties, and in towns they shall be subject to the inspection of the selectmen. The auditor or officer having similar duties, or the selectmen may require any person presenting for settlement an account or claim against the city or town to make oath before him or them, in such form as he or they may prescribe, as to the accuracy of such account or claim. The wilful making of a false oath shall be perjury, and punishable as such. The auditor or officer having similar duties, in cities, and the selectmen in towns, shall approve the payment of all bills or pay rolls of all departments before same are paid by the treasurer, and may disallow and refuse to approve for payment, in whole or in part, any claim on the ground that it is fraudulent, unlawful or excessive, and in that case the auditor or officer having similar duties, or the selectmen, shall file with the treasurer of the city or town a written statement of the reasons for the refusal ; and the treasurer shall not pay any claim or bill so disallowed.

SECTION 2. Nothing in this act contained shall be construed as abridging the powers and authority conferred on town accountants by the provisions of chapter six hundred and twenty-four of the acts of the year nineteen hundred and ten and acts in amendment thereof.

SECTION 3. All provisions of law inconsistent herewith are hereby repealed.

SECTION 4. This act shall take effect upon its passage. [*Approved May 16, 1913.*]

[*Explanatory Note.*—All bills and pay rolls submitted to the auditor or officer having similar duties in cities, and in towns to the selectmen or town accountant, should be approved by the department directing or authorizing the expenditure. The *bills* forwarded should be accompanied by the names of persons to whom payments are to be made, together with the amounts payable. This list should be arranged in the form of a warrant, so that the auditor or officer having similar duties or selectmen may approve the payment *by the signing of such warrant*. Pay rolls may be arranged so as to provide for this approval, or may be accompanied by a regular warrant.—C. F. G.]

#### An Act relative to Municipal Indebtedness.

(Chapter 719 of the Acts of 1913.)

Be it enacted, etc., as follows:

Section 1. The provisions of this act shall not, except as is hereinafter specified, apply to the city of Boston, but said city shall remain subject to the provisions of all general and special laws applicable to it.

Section 2. In this act, unless the context otherwise requires: "revenue" means receipts from taxes and income from all other sources; "majority vote" and "two thirds vote" as applied to towns mean the vote of a majority or two thirds of the voters present and voting at a town meeting duly called, and, as applied to cities, mean the vote taken by yeas and nays of a majority or of two thirds, as the case may require, of all the members of each branch of the city government, where there are two branches, or of all the members where there is a single branch of the city government, or of a majority or two thirds of the commissioners, where the city government consists of a commission; and in every case subject to the approval of the mayor, where such approval is required by the charter of the city.

Section 3. Cities and towns, and fire, water and watch districts, so-called, may, by a majority vote, incur debt for temporary loans in anticipation of the revenue of the financial year in which the debt is incurred and expressly made payable therefrom by such vote, and may issue a note or notes therefor to an amount not exceeding in the aggregate the total tax levy of the preceding financial year, together with the bank, corporation and street railway tax received during the preceding financial year, exclusive of special or additional assessments

or revenue from any other source except payments made by the commonwealth in lieu of taxes on account of property taken for institutions or for metropolitan district purposes. Such notes shall be payable, and shall be paid, not later than one year from the date thereof, and shall not be renewed or paid by the issue of new notes, except as is provided in section nine.

Section 4. Cities and towns may by a majority vote, incur debt for temporary loans for the payment of any land damages or any proportion of the general expenses of altering a grade crossing which they are required primarily to pay under the provisions of the law, or any proportion of the expense of constructing a highway in anticipation of reimbursement by the commonwealth, such reimbursement first to have been agreed upon by the Massachusetts highway commission, and may issue a note or notes therefor and for a period not exceeding one year from the date thereof; and when any money so paid is repaid to the municipality, it shall be applied to the discharge of the loan. Notes issued under the provisions of this section shall not be renewed or paid by the issue of new notes, except as is provided in section nine.

Section 5. Cities and towns may incur debt, within the limit of indebtedness prescribed in this act, for the following purposes, and payable within the periods hereinafter specified:—

(1) For the construction of sewers for sanitary and surface drainage purposes and for sewerage disposal, thirty years.

(2) For acquiring land for public parks under the provisions of chapter twenty-eight of the Revised Laws and amendments thereof, thirty years.

(3) For acquiring land for, and the construction of, schoolhouses or buildings to be used for any municipal or departmental purpose, including the cost of original equipment and furnishing, twenty years.

(4) For the construction of additions to schoolhouses or buildings to be used for any municipal purpose, including the cost of original equipment and furnishings, where such additions increase the floor space of said buildings to which such additions are made, twenty years.

(5) For the construction of bridges of stone or concrete, or of iron superstructure, twenty years.

(6) For the original construction of streets or highways or the extension or widening of streets or highways, including land damages and the cost of pavement and sidewalks laid at the time of said construction, ten years.

(7) For the construction of stone, block, brick or other permanent pavement of similar lasting character, ten years.

(8) For macadam pavement under specifications approved by the Massachusetts highway commission, five years.

(9) For the construction of walls or dikes for the protection of highways or property, ten years.

(10) For the purchase of land for cemetery purposes, ten years.

(11) For such part of the cost of additional departmental equipment as is in excess of twenty-five cents per one thousand dollars of the preceding year's valuation, five years.

(12) For the construction of sidewalks of brick, stone, concrete or other material of similar lasting character, five years.



(13) For connecting dwellings or other buildings with public sewers, when a portion of the cost is to be assessed on the abutting property owners, five years.

(14) For the abatement of nuisances in order to conserve the public health, five years.

(15) For extreme emergency appropriations involving the health or safety of the people or their property, five years.

Debts may be authorized under the provisions of this section only by a vote of two thirds of the voters present and voting, or of two thirds of all the members of a city council or other governing body, taken by yeas and nays, and subject to the approval of the mayor, if such approval is required by the charter of the city.

Section 6. Cities and towns may incur debt, outside the limit of indebtedness prescribed in this act, for the following purposes and payable within the periods hereinafter specified:—

(1) For temporary loans under the provisions of sections three, four, or nine, one year.

(2) For establishing or purchasing a system for supplying the inhabitants of a city or town with water, or for the purchase of land for the protection of a water system, or for acquiring water rights, thirty years.

(3) For the extension of water mains and for water departmental equipment, five years.

(4) For establishing, purchasing, extending or enlarging a gas or electric lighting plant within the limits of a city or town, twenty years; but the indebtedness so incurred shall be limited to an amount not exceeding in a town five per cent and in a city two and one half per cent of the last preceding assessed valuation of such town or city.

(5) For acquiring land for the purposes of a public playground, as specified in section nineteen of chapter twenty-eight of the Revised Laws and amendments thereof, thirty years; but the indebtedness so incurred shall be limited to an amount not exceeding one half of one per cent of the last preceding assessed valuation of the city or town.

Debts for all of the purposes mentioned in this section shall be payable within the periods above specified from the date of the first issue of bonds or notes on account thereof, and may be incurred in accordance with the provisions of existing law, except in so far as the same are inconsistent with the provisions of this act. All other debts hereafter incurred by a city or town shall be reckoned in determining its limit of indebtedness, and debts authorized under the provisions of this section, except for temporary loans, may be incurred only by a vote of two thirds of the voters present and voting or of two thirds of all the members of a city council or other governing body, taken by yeas and nays, and subject to the approval of the mayor, if such approval is required by the charter of the city.

Section 7. Cities and towns shall not incur debt for any purpose or for any period of time other than as specified in this act or in chapter six hundred and thirty-four of the acts of the year nineteen hundred and thirteen of the acts of the year nineteen hundred and

thirteen, and the proceeds of any sale of bonds or notes, except premiums, shall be used only for the purposes specified in the authorization of the loan; provided, however, that transfers of unexpended amounts may be made to other accounts to be used for similar purposes.

Section 8. A city or town, which has authorized a debt to be incurred within the limitations as to amount and time of payment prescribed by this act may issue bonds, notes or certificates of indebtedness therefor, properly denominated on the face thereof, signed by its treasurer, and, if issued by a city, countersigned by its mayor, unless its charter otherwise provides, or if issued by a town, countersigned by a majority of its selectmen, and by any other officers, boards or commissioners of a city or town whose counter-signatures may be required by law, at such rate of interest as may be deemed proper, and such city or town may, except as provided in section nine, sell such bonds, notes or certificates of indebtedness at not less than par, at public or private sale, or may use the same in payment of such debts: provided, however, that if the amount of the annual payment and the period of the loan are not specified by the vote authorizing the debt to be incurred, the officers authorized to issue bonds or notes therefor may issue the same subject to the provisions and limitations of this act. The auditor or similar officer in cities, and the town accountant in towns having such an officer, and the treasurer in all other towns shall, not later than May first of each year, notify the board of assessors in writing of the amount of debt falling due during the current financial year, the sinking fund requirements, if any, and what provision has been made for meeting such requirements; and the board shall make such provision for meeting said debt and sinking fund requirements in the tax levy of that year as in its judgment may be necessary.

Section 9. If a city or town votes to issue bonds, notes or certificates of indebtedness in accordance with the provisions of law, the officers authorized to issue the same may, in the name of such city or town, make a temporary loan for a period of not more than one year in anticipation of the money to be derived from the sale of such bonds, notes or certificates of indebtedness and may issue notes therefor; but the time within which such securities shall become due and payable shall not be extended by reason of the making of such temporary loan beyond the time fixed in the vote authorizing the issue of such bonds, notes or certificates of indebtedness; and notes issued under the provisions of this section and of sections three and four of this act for a shorter period than one year may be refunded by the issue of other notes maturing within the required period.

Section 10. Notes issued under the provisions of sections three, four and nine of this act may be sold at such discount as the treasurer or other officer authorized to sell the same may, with the approval of the officer or officers whose counter-signature is required on said notes, deem proper; the discount to be treated as interest paid in advance.

Section 11. A city which, at a meeting of its voters held for that purpose, has accepted, by a vote of two thirds of the legal voters present and voting thereon, any act to supply the city with water, may, by a yea and nay vote of two thirds of all the members of each branch of the city council or other governing body, with the approval of the mayor when the charter of the city requires such approval, incur debt and issue bonds or notes for the purposes and to the extent authorized by such act, in the manner provided in, and subject to the provisions of, section fourteen of this act.

Section 12. Except as otherwise authorized by section six of this act or by chapter six hundred and thirty-four of the acts of the year nineteen hundred and thirteen, a city shall not authorize indebtedness to an amount exceeding two and one half per cent, and a town shall not authorize indebtedness to an amount exceeding three per cent, on the average of the assessors' valuations of the taxable property for the three preceding calendar years, the valuations being first reduced by the amount of all abatements allowed thereon previous to the last day of December of the preceding calendar year.

Section 13. No further sinking funds for the payment of debt shall be established by any city or town, but cities and towns shall contribute to every sinking fund established prior to the passage of this act until such sinking fund, with its accumulations, shall be sufficient to extinguish at maturity the debt for which it was established, and all provisions of law relating to the manner of establishing, administering and investing sinking funds which may be in force at the time of the passage of this act shall remain in force with respect to all sinking funds established prior thereto.

Section 14. Cities and towns shall not issue any notes payable on demand, and they shall provide for the payment of all debts, except those incurred under the provisions of sections three, four and nine, by such annual payments as will extinguish the same at maturity, and so that the first of such annual payments on account of any loan shall be made not later than one year after the date of the bond or notes issued therefor, and so that the amount of such annual payments in any year on account of such debts, so far as issued, shall not be less than the amount of principal payable in any subsequent year, and such annual amount, together with the interest on all debts, shall, without further vote, be assessed until the debt is extinguished.

Section 15. Cities and towns may pay or provide for the payment of any debt, whether incurred before or after the passage of this act, at an earlier period than is required by the provisions of this act, and shall not refund any debt except as provided in section nine of this act; and cities and towns may, for the purpose of reducing the whole debt for the redemption of which sinking funds have been established prior to the passage of this act, or of reducing the amount to be raised by taxation for such funds, add to any such sinking fund the excess of any appropriation over the amount required for the purpose thereof, or add to such funds any sums derived from taxation or from other sources not required by law to be expended otherwise.



Section 16. No department of any city or town shall incur liability in excess of the appropriation made for the use of such department, except in cases of extreme emergency involving the health or safety of persons or property, and then only by a vote in cities or two thirds of the members of the city council, and in a commission form of government by a vote of two thirds of the members of the commission, and in a town by a vote of two thirds of the selectmen.

Section 17. Trust funds, including cemetery perpetual care funds, unless it is otherwise provided or directed by the donor thereof, shall hereafter be deposited in savings banks or invested by cities and towns in securities which are legal investments for savings banks.

Section 18. Section fifty-three of Part I of chapter four hundred and ninety of the acts of the year nineteen hundred and nine, as amended by chapter five hundred and twenty-one of the acts of the year nineteen hundred and ten, is hereby further amended by striking out the said section and inserting in place thereof the following:—  
Section 53. The taxes assessed in the city of Boston on property, exclusive of the state tax and other amounts assessed upon the city by the commonwealth, the county tax and sums required by law by the commonwealth, the county tax and sums required by law to be raised on account of the city debt, shall not in any year exceed ten dollars and fifty-five cents on every one thousand dollars of the average of the assessors' valuation of the taxable property therein for the preceding three years, such valuation being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment. Any order or appropriation requiring a larger assessment than is herein limited shall be void. ,

Section 19. Within ninety days after the passage of this act the city council or other governing body of every city, except Boston, shall give a public hearing in regard to establishing a tax limit for that city. The time and place of holding such hearing shall be duly advertised, and, after the hearing, any city, except Boston, may provide by ordinance that the taxes assessed on property therein, exclusive of the state tax and other amounts assessed upon the city by the commonwealth, the county tax and sums required by law to be raised on account of the city debt, shall not in any year succeeding the adoption of such ordinance exceed an amount specified in the ordinance on every one thousand dollars of the average of the assessors' valuation of the taxable property therein for the preceding three years, such valuation being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment; and the tax limit so established by ordinance shall have the force of law until it is annulled or modified by the action of the city council or other governing body of the city. After such ordinance has been established it shall not be annulled or modified within one year thereafter, and then only after a public hearing, duly advertised, and by a two thirds vote of the city council or other governing body of the city.

Section 20. Within sixty days after the annual organization of the city government, the mayor of every city, except Boston and those cities having the commission form of government, so-called, shall submit to the city council the annual budget of the current expenses of the city, and the mayor may submit thereafter supplementary budgets until such time as the tax rate for the year shall be fixed. The budget shall consist of an itemized and detailed statement of the money required, and the city council shall make such appropriations in detail, clearly specifying the amount to be expended for each particular purpose. The city council may reduce or reject any item, but without the approval of the mayor, shall not increase any item in nor the total of a budget, nor add any item thereto. It shall be the duty of the city officials, when so requested by the mayor, to submit to him forthwith in such detail as he may require estimates for the next fiscal year of the expenditures of their departments or offices under their charge, which estimate shall be transmitted to the city council. In case of the failure of the mayor to transmit in writing to the city council a recommendation for an appropriation of money for any purpose deemed by the council to be necessary, and after having been so requested by vote of the city council, said council, after the expiration of seven days after such vote, upon its own initiative, may make an appropriation for such purpose by a vote of at least two thirds of its members, and shall in all cases make such appropriations in detail, clearly specifying the amount to be expended for each particular purpose; and in cities having the commission form of government, so-called, each commissioner or director shall, within thirty days after the annual organization of the city government, submit to the commissioner or director of finance estimates in such detail as he may require of the amounts deemed necessary for the current expenses for their respective departments, and the commissioner or director of finance shall within thirty days thereafter submit to the city council a budget consisting of an itemized and detailed statement of the money required, and may submit thereafter supplemental budgets until such time as the tax rate for the year shall be fixed, and the budget or budgets shall be passed by a majority vote of the city council. In case of the failure of the finance commissioner or director to transmit in writing to the city council a recommendation for an appropriation of money for any purpose deemed by the council to be necessary, and after having been requested by vote of the city council, said council, after the expiration of seven days after such vote, upon its own initiative, may make an appropriation for such purpose by a vote of at least two thirds of all its members, and shall in all cases make such appropriation in detail, clearly specify the amount to be expended for each particular purpose. In the period after the expiration of any fiscal year and before the regular appropriations have been made by the city council, liabilities may be incurred and expenditures made payable out of the regular appropriations to an amount not exceeding in any month sums spent for similar purposes during any one month of the preceding year, or may expend in any one month for any officer or board created by law an amount not exceeding one twelfth of

the estimated cost for that year, but all interest and debt falling due in said period shall be paid.

Section 21. The supreme judicial court or the superior court, by mandamus or other appropriate remedy at law or in equity, upon the suit or petition of the attorney-general or of the mayor, or of one or more taxable inhabitants of a city, town or district authorized by law to incur debt, or of any creditor to whom a city or town or district authorized by law to incur debt is indebted to an amount not less than one thousand dollars, may compel such city or town or district, and its assessors, collectors, treasurer, commissioners of sinking funds and other proper officers, to conform to the provisions of this act.

Section 22. All acts and parts of acts and all provisions of any city charter inconsistent herewith, except such as relate to sinking funds established prior to the passage of this act, are hereby repealed, and all ordinances of any city and all by-laws of any town inconsistent herewith are hereby annulled; but neither this section nor any other part of this act shall be construed as affecting the validity of any debt incurred by virtue of authority granted therefor prior to the passage of this act, or as affecting the right of any city, town or district to incur, renew, fund or refund any debt in accordance with the provisions of any special act passed prior to the passage of this act; nor shall the restrictions of this act exempt a city, town or district authorized to incur debt from its liability to pay debts contracted for purposes for which it may lawfully expend money; nor shall anything in this act be construed as prohibiting any city, town or district authorized to incur debt from placing additional restrictions upon the manner of incurring debt, not inconsistent with this act.

Section 23. The provisions of this act, so far as they are the same as those of existing statutes, shall be construed as continuations thereof and not as new enactments, and a reference in a statute which has not been repealed to provisions of law which are revised and re-enacted herein shall be construed as applying to such provisions as so incorporated in this act. The provisions of this act shall not affect any act done, liability incurred, or any right accrued and established, or any suit or prosecution, civil or criminal, pending or to be instituted, to enforce any right or penalty or to punish any offence under the authority of existing laws; but the proceedings in such cases shall conform to the provisions of this act.

Section 24. Sections thirteen, fourteen and nineteen of this act shall take effect upon its passage, and cities and towns incurring debts in accordance with the provisions of section eleven of chapter twenty-seven of the Revised Laws and of acts in amendment thereof, prior to the first day of January, nineteen hundred and fourteen, shall make provision for the payment thereof in the manner provided for by section fourteen of this act; and the remainder of this act shall take effect on the first day of January, nineteen hundred and fourteen. (Approved May 28, 1913.)

**An Act to Determine the Disposition to be Made of Premiums upon Municipal Bonds.**

(Chapter 379 of the Acts of 1910.)

Be it enacted, etc., as follows: -

Section 1. Whenever a city, town, fire district, or water district shall issue and sell bonds to pay for the construction, purchase or extension of water works, sewerage disposal system, electric lighting plants, street pavements or other public improvements, or for the refunding of any debt previously contracted for any such purpose, any premium received upon such bonds, less the cost of preparing, issuing and marketing them shall be applied to the payment of the principal of the bonds in the manner prescribed in the following sections.

Section 2. When a sinking fund has been or is to be established to pay said bonds at maturity, the premium shall be added forthwith to the sinking fund, and the amount of the annual contribution to be made to the sinking fund shall be reduced correspondingly.

Section 3. In case no sinking fund is established for the retirement of the bonds, but in lieu thereof certain of the bonds mature and are to be paid at fixed periods, any premium received as set forth in section one shall be applied to the payment of the principal of the first bond or bonds so to mature; and the contributions from other sources for the payment of said bonds shall be reduced correspondingly.

Section 4. This act shall take effect upon its passage. (Approved April 8, 1910.

**An Act to provide for the Payment of Outstanding Demand Notes and the Restoration of Trust Funds by Cities and Towns.**

(Chapter 634 of the Acts of 1913.)

Be it enacted, etc., as follows:

Section 1. During the year nineteen hundred and fourteen, every city or town which has at the time when this act takes effect outstanding notes payable on demand, or which has expended for the general expenses of the city or town trust funds which have not been restored, shall provide for the payment of such notes and for the restoration of such trust funds in the tax levy for the year nineteen hundred and fourteen, where such provision is reasonably practicable; but where it would be unreasonably burdensome for the city or town to provide in the tax levy of the year nineteen hundred and fourteen for the payment of its outstanding demand notes and for the restoration of any trust funds heretofore expended for general expenses, such city or town may provide for such payment and restoration as authorized by section two of this act.

Section 2. For the purpose of paying any notes of a city or town payable on demand and outstanding when this act takes effect, and also for the purpose of restoring any trust funds which were received by a city or town and subsequently expended by it for the general expenses of such city or town is hereby authorized to borrow outside the



limit of indebtedness fixed by law for such city or town, a sum or sums of money not exceeding in the aggregate the amount required for paying such demand notes and for the restoring of such trust funds, and to issue notes or bonds therefor payable at periods not exceeding fifteen years from their respective dates of issue. Such notes or bonds when issued by a city shall be signed by the treasurer and countersigned by the mayor, and when issued by a town shall be signed by the treasurer and countersigned by the selectmen or by a majority of them; and shall bear interest and shall be sold or disposed of in such manner and on such terms as the treasurer and mayor of the city or the treasurer and the selectmen of the town may determine, but they shall not be sold for less than their par value.

Section 3. Cities and towns, at the time of issuing such notes or bonds, shall provide for the payment thereof by such annual payments as will extinguish the same within the time prescribed in the preceding section, and in such manner that the first of such annual payments shall be made not later than one year after the date of the bonds or notes issued therefor, and that the amount of such annual payments in any year shall not be less than the amount of the principal payable in any subsequent year; and such annual amount together with the interest payable in that year, shall, without further vote, be assessed annually thereafter until the whole debt is extinguished.

Section 4. This act shall take effect on the first day of January, nineteen hundred and fourteen. )Approved May 8, 1913.

**An Act relative to Petitions for Legislation authorizing Cities and Towns to borrow Money Outside the Statutory Limit of Indebtedness.**

(Chapter 677 of the Acts of 1913.)

Be it enacted, etc., as follows:

Section 1. Whenever a petition is presented to the general court asking that any city or town mentioned in the petition shall have authority to borrow money outside of its statutory limit of indebtedness, the director of the bureau of statistics shall transmit to the committee of the general court to which the petition is referred information as to the financial condition of such city or town. All petitions to the legislature, with accompanying bills, of any city or town for authority to borrow money outside the statutory limit of indebtedness shall be transmitted by the committee of the legislature to which the same may be referred to the director of the bureau of statistics for information as to the financial condition of the city or town, and said director shall, as soon as possible, make a report thereon to said committee.

Section 2. This act shall take effect upon its passage. (Approved May 19, 1913.

**An Act relative to the Issuing of Notes by Fire, Water, Watch, Light and Improvement Districts.**

(Chapter 727 of the Acts of 1913.)

Be it enacted, etc, as follows:

Section 1. The director of the bureau of statistics shall prepare for the use of the treasurer of each fire, water, watch, light and improvement district now or hereafter created in accordance with any statute of the commonwealth, forms for the issue of notes for money borrowed by such districts. Every such note shall state upon its face the amount of the same; the date of issue, which date shall be construed as the date from which interest is payable; the date when it will become due for payment; and such other matter as the director of the bureau of statistics may deem necessary; and a record of every such note shall be kept by the treasurer of the district in such form as the director of the bureau of statistics may designate.

Section 2. Whenever a fire, water, watch, light or improvement district wishes to borrow money in anticipation of revenue or for any other purpose, the treasurer thereof shall make a note or notes for the amount of the proposed loan and shall use one or more, in serial order, of the forms provided for in section one of this act, with the blank spaces thereon properly filled in, except that the rate of interest need not be designated prior to the certification of the note as hereinafter provided for. Every such note shall be signed by the treasurer, and a majority of the board of trustees or commissioners shall countersign and approve the same in the presence of the clerk of the district, who shall certify to the fact on the face of the note. The treasurer, after making a record of the transaction in accordance with the provisions of section one, shall forward every such note to the director of the bureau of statistics, together with a copy of said record, and a copy of the vote authorizing the loan, certified by the clerk of the district, and a certification by said clerk that the person whose signature appears upon the note as that of the treasurer was the duly authorized treasurer of the district at the date when such signature was made, and that the person whose signatures appear upon the note as those of a majority of the trustees or commissioners when such signatures were made; and the treasurer shall furnish such other information in connection with the financial condition of the district as the director of the bureau of statistics may, in his judgment, require to enable him properly to certify the note as provided for in section three of this act; and he shall at the same time forward the fee provided for by section four of this act.

Section 3. If, upon examination of a note forwarded to him as provided for by section two of this act, the director of the bureau of statistics finds that the note appears to have been duly issued in accordance with a vote of the district which authorized the same, in accordance with an act of the general court, he shall so certify, and shall thereupon return the note by registered mail to the treasurer of the district or, under such regulations as he may prescribe and if so authorized by the treasurer with the approval of the trustees or com-

missioners of the district, he may deliver a certified note to the payee thereof. The director shall not certify any note payable on demand. The director is authorized to certify to the issue of a note, provided that the other conditions of this act have been complied with, on any date not earlier than three days prior to the date of issue as it appears on the note.

Section 4. The director of the bureau of statistics shall establish a reasonable fee to be charged for every note certified under the provisions of this act, but he is authorized to refund any fee collected in case a note is cancelled before any money is obtained thereon, and he shall turn over monthly to the treasurer of the commonwealth all fees collected, less the amount of refunds; and the treasurer of the commonwealth is authorized to refund the amount of any fee deposited with him by said director for the certification of any note which may be cancelled before money is obtained thereon.

Section 5. Whenever any note issued by a fire, water, watch, light or improvement district within the commonwealth, whether such note was issued before or after the passage of this act, shall become due and shall have been paid, the treasurer of such district shall immediately notify the director of the bureau of statistics of such payment.

Section 6. The treasurer of any fire, water, watch, light or improvement district who violates any provision of this act shall be liable to a fine of not less than one hundred nor more than five hundred dollars.

Section 7. This act shall take effect on the first day of January, in the year nineteen hundred and fourteen. (Approved May 29, 1913.

#### **An Act relative to the Verification of Certain Pay Rolls .**

(Chapter 825 of the Acts of 1913).

Be it enacted, etc., as follows:

Section 1. Chapter five hundred and twenty of the acts of the year nineteen hundred and thirteen is hereby amended by inserting after section two the following new section:—Section 3. A city council, board of aldermen, common council, commission, committee, or board of trustees may, for the purposes of this chapter, designate any one of its members to make oath to a pay roll, bill or account for salary or compensation of its membership or employees: provided, however, that nothing in this section shall be held to limit the responsibility of each member of any city council, board of aldermen, common council, commission, committee, or board of trustees in the event of a non-compliance with the provisions of this chapter.

Section 2. This act shall take effect upon its passage. Approved June 16, 1913.



**The Law requiring Returns of Financial Transactions to be made to the Bureau of Statistics.**

Extract from Chapter 371 of the Acts of 1909.)

Section 6. The director of the bureau of statistics shall annually furnish to the auditor or other accounting officer of each city and town in the commonwealth blank forms or schedules so arranged as to provide for uniform returns giving detailed statements of all receipts classified by sources, and all payments classified by objects, for its last fiscal year; a statement of the public debt showing the purpose for which each item of the debt was created and the provision made for the payment thereof; and a statement of assets and liabilities at the close of the fiscal year. The director may prescribe standard forms intended to promote the systematic accounting of financial transactions and the publication of the same in the city and town reports. The director is also authorized to collect from the proper local authorities and to compile and publish such other information pertaining to municipal affairs as in his judgment may be of public interest; and it shall be the duty of all accounting and other officials and custodians of public moneys of cities and towns, of fire, water, and watch districts, so-called, and of districts organized under the provisions of section forty-four of chapter twenty-five of the Revised Laws, to fill out properly and return promptly to the said director all schedules transmitted by him to them.

**An Act relative to the Overlay of Taxes.**

(Chapter 649 of the Acts of 1913, as amended by Chapter 823 of the Acts of 1913.)

Be it enacted, etc., as follows:

Section 1. Part I of chapter four hundred and ninety of the acts of the year nineteen hundred and nine is hereby amended by striking out section fifty-four and inserting in place thereof the following:—  
Section 54. The assessors, except in the city of Boston, may add to the amount to be assessed not more than five per cent thereof, although the limit of taxation as fixed by any city may by such overlay be exceeded, such amount to be used only for avoiding fractional divisions of the amount to be assessed in the apportionment thereof and for abatements granted on account of polls assessed in the year in which the overlay is made or of taxes in the warrant of which the overlay is a part; but any balance in the overlay account, in excess of the amount of the warrant remaining to be collected or abated, shall be transferred to a reserve fund to be used for extraordinary or unforeseen expenses. In the city of Boston the assessors, for the purpose of avoiding fractional divisions of the amount to be assessed in the apportionment thereof and providing for abatements granted on account of taxes assessed, may add to the amount to be assessed not more than five per cent thereof, although the limit of taxation for that city may by such overlay be exceeded.

Section 2. This act shall take effect upon its passage. (Approved May 13, 1913; amendment approved June 16, 1913.)

**An Act to Facilitate the Prompt Payment of Taxes.**

(Chapter 688 of the Acts of 1913, as amended by Chapter 824 of the Acts of 1913.)

Be it enacted, etc., as follows:

Section 1. Part I of chapter four hundred and ninety of the acts of the year nineteen hundred and nine is hereby amended by striking out section seventy-one and inserting in place thereof the following: Section 71. Taxes shall be payable in every city and town, and in every fire, water, watch or improvement district in which the same are assessed, not later than the fifteenth day of October of each year, and on all taxes so assessed remaining unpaid after the first day of November interest shall be paid at the rate of six per cent per annum from the fifteenth day of October until such taxes are paid; but a city, town, fire, water, watch or improvement district may by vote, ordinance or by-laws charge interest from an earlier date, and such interest shall be added to and be a part of the taxes.

Section 2. On all taxes of previous years remaining unpaid on the first day of January, nineteen hundred and fifteen, interest shall be charged at the rate of six per cent per annum until they are paid.

Section 3. Cities and towns shall not allow any discount to persons or corporations making payment of their taxes.

Section 4. If taxes assessed after this act takes effect remain unpaid for fourteen days after demand therefor, the collector shall, within one year after the first day of October in the year of the assessment, levy the tax, together with all incidental charges and fees, in the manner provided by law.

Section 5. Section seventy of Part I of chapter four hundred and ninety of the acts of the year nineteen hundred and nine, and all acts and parts of acts inconsistent herewith, are hereby repealed.

Section 6. This act shall take effect on the first day of January, nineteen hundred and fifteen. (Approved May 20, 1913; amendment approved June 16, 1913.

**An Act to Facilitate the Filing of Official Letters.**

(Chapter 702 of the Acts of 1913.)

Be it enacted, etc., as follows:

Section 1. For the purpose of facilitating the filing of official letters, such letters from the several departments of the commonwealth and from officials of counties, cities and towns therein shall be written or printed, so far as may be practicable, on paper having a width of eight and one-half inches and a length of eleven inches.

Section 2. This act shall take effect on the first day of October, nineteen hundred and thirteen. (Approved May 26, 1913.

## BALANCE SHEET

## CITY OF LOWELL

JANUARY 1, 1913

## REVENUE

## Asset Accounts

Cash:

In banks and office (general) .....	\$ 150,354 58
In banks, cemetery perpetual care income .....	23 42

Accounts receivable:

Taxes, 1910 .....	16,851 30
Taxes, 1911 .....	189,130 54
Taxes, 1912 .....	423,078 68

Moth Assessments, 1911...

	838 10
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Moth Assessments, 1912 ..

	1,156 86
--	----------

Street sprinkling assessments, 1911 .....

	3,040 19
--	----------

Street sprinkling assessments, 1912 .....

	6,636 29
--	----------

Sidewalk assessments, 1911 and prior .....

	2,485 11
--	----------

Departmental bills .....

	3,744 06
--	----------

Cemetery bills .....

	1,372 42
--	----------

Water rates, 1912 and prior

	8,090 53
--	----------

Tax Titles .....

	2,346 65
--	----------

\$ 809,975 31

## Liability Accounts

Temporary loans:

\$ 600,000 00

Anticipation of taxes, 1912

Appropriation balances:

Fire department .....

\$ 18,049 99

Water department .....

41,657 70

Cemetery perpetual care

income .....

23 42

59,731 11

Overlay, 1910 (reserved for abatements) .....

3,437 57

Overlays, 1912 (reserved for abatements) .....

20,332 40

23,769 97

Revenue (reserved when collected):

For Cemetery department .....

1,372 42

For Water department .....

8,090 53

9,462 95

Non-revenue cash used for revenue purposes (library) .....

243 51

Surplus revenue 1912 and prior ..

116,767 77

\$ 809,975 31

# NON - REVENUE

## General

### Cash :

In banks and office (general) .....	\$ 63,318 59
In banks (library) .....	3,756 49

Non revenue cash used for  
revenue purposes.....  
Loans authorized .....

\$ 67,075 08
243 51
6,000 00
<hr/>
\$ 73,318 59

### Appropriation balances :

Fire house improvements .....	\$ 639 05
Rifle-range improvements .....	739 91
Contagious hospitals .....	4,768 95
Health department, stable, sheds .....	6,000 00
City hospital repairs .....	1,240 38
Comfort station .....	16,399 07
Congress and Billerica Street bridge .....	1,542 62
Lawrence St. bridge .....	464 14
Shaw St. extension .....	989 84
City stable .....	11,975 45
Improvement, city library .....	4,000 00
Water reservoir, new wells .....	24,559 18

\$ 73,318 59

## Indebtedness

### Sinking funds—cash and securities :

City Hall fund .....	\$ 289,616 60
High School Fund .....	96,837 23
New schoolhouse fund .....	82,509 82
Water construction fund ..	625,209 08

Net bonded debt (balancing  
account .....

\$1,094,172 73
2,634,603 87
<hr/>
\$3,728,776 60

### Funded or fixed debt :

City Hall loan .....	\$ 450,000 00
High School loan .....	150,000 00
New schoolhouse loan .....	200,000 00
Water Construction loan .....	1,000,000 00
General city loan (serial) .....	1,892,576 60
Trust funds (used by city) .....	36,200 00

\$3,728,776 60

## CITY OF LOWELL

JANUARY 1, 1913—Continued

## BALANCE SHEET

Trust		
Trust funds:		
Cash and securities.....	\$180,236 21	
Used by city.....	36,200 00	
		\$ 216,436 21
Trust funds:		
Carney Medal Fund.....	\$ 200 00	
Hapgood Wright Fund.....	4,467, 13	
John Davis Library Fund ....	97,486 21	
Jonathan Tyler Worthy Poor Fund .....	10,000 00	
Thomas Nesmith Worthy Poor Fund .....	25,000 00	
Thomas Nesmith Fund .....	1,000 00	
Cemetery Perpetual Care Funds	78,272 87	
		\$ 216,436 21

EVERETT E. TARBOX,

Accountant for the Massachusetts Bureau of Statistics

June 1, 1913







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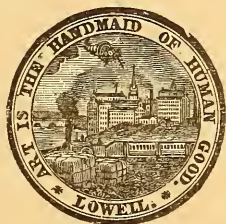
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FIRST ANNUAL REPORT  
*OF THE*  
Commissioner of Water Works  
*AND THE*  
REPORTS OF THE SUPERIN-  
TENDENT OF WATER WORKS  
AND OF THE CITY ENGINEER  
TO THE COMMISSIONER FOR  
THE YEAR ENDING, DECEMBER THIRTY-  
FIRST, NINETEEN HUNDRED  
AND TWELVE.



LOWELL, MASS.,  
THE LAWLER PRINTING COMPANY,  
1913



# Report of the Commissioner of Water Works

---

LOWELL, MASS., January 1, 1913.

*To the Municipal Council of the City of Lowell.*

GENTLEMEN:

I herewith submit my report for the year ending December 31, 1912, the Fortieth Report of the Water Department, and my first year as Water Commissioner.

It has been my aim through the year to do those things which should give the citizens of Lowell a better water supply and reduce the cost in every way possible.

There has been a material reduction in the cost of meters the past year, as we have been able to purchase them so that we could sell a  $\frac{5}{8}$ " disc meter, for which we were formerly obliged to charge \$9.25 for \$7.50;  $\frac{3}{4}$ " for \$12.50 instead of \$14.00; 1" for \$15.00 instead of \$18.50;  $1\frac{1}{2}$ " for \$30.00 instead of \$33.00 and 2" for \$50.00 instead of \$55.00. We have also abolished the charge of \$1.50 for cleaning meters and have taken over the care and repair of all meters in the city, without cost to the consumer, so that now the Water Department takes out the meters, cleans and repairs them and puts them back free of charge. Commencing March 1st, 1913, an additional discount of 10% will be allowed on all water bills, making the discount

20%. This additional discount, together with the reduction in the price of meters, the abolition of the charge for cleaning meters and the taking over of the care and repair of meters by the Water Department will mean an annual saving to the water takers of the City of Lowell of about \$30,000. There has also been a reduction of about 20% in the cost of service pipes. We have instituted the policy of not putting in any connection into the mains smaller than 1", where formerly we sometimes used a  $\frac{3}{4}$ ".

The past year has witnessed the completion of the new reservoir, which we hope will give additional pressure and better service in the Highlands and other high sections of the city.

We have also made a substantial gain toward relieving the conditions in the Highlands by laying a 20" main from the corner of Cabot and Moody Streets and along Adams Street to Cross Street. This year we propose to continue the main from Cross Street to Liberty Square where it will connect with the 16" main which we started to put in at the Lowell Machine Shop and which will extend down Dutton Street to Fletcher Street to Liberty Square. From Rock Street to School Street, from School Street to Broadway; along Broadway to Wilder and Wilder to the corner of Princeton. It is also our intention this year to lay a 24" main across the Merrimack River from the West Sixth Street Pumping Station along West Sixth Street to connect with our present system at the corner of Hall and Cabot Streets. This will duplicate the system which we have at present and will eliminate the danger of the city being left without sufficient water supply should there be a break in the present system. It will also give a much better distribution system as there will be two distinct lines

throughout the city proper. This is something which has been demanded for years and will mean better service, both for household use and fire protection. We further propose to lay a 16" line beginning with the present 16" line at the corner of Church and Central Streets, through Appleton Street and along Chelmsford over the railroad, where before there has been no connection, but a distinct break in the system. We hope to extend this along Westford Street to the corner of Howard Street this year and in 1914 we trust that a further extension can be made so that the large main going along Westford Street and the large main going into the Highlands from Wilder Street may be connected and so furnish better service both for domestic use and fire protection throughout the entire Highlands. All cross streets will be connected with the main line.

From observation and a study of the present system the following conditions have become apparent and we feel that some measure should be taken to remedy the difficulties. A brief outline of past and present conditions will enable the citizens to better understand the problem which must be solved.

The original supply, built in 1870, was from a filter gallery in the bank of the Merrimack River, a short distance above the Pawtucket Dam. This supply proving insufficient, a small filter was constructed in 1876, but likewise proved inadequate, and water was taken direct from the river in varying quantities from 1879 to 1896. During 1890 and 1891 severe typhoid epidemics made apparent the need of better water, and the development of a ground water supply was undertaken.

In 1893 the Cook Wells, so-called, in the valley of River Meadow Brook were put in service, yielding about 3,000,000 gallons daily. In 1894 another series of wells in the same valley known as the Hydraulic Wells were driven, and



these in combination with the Cook Wells yielded slightly less than 5,000,000 gallons. As the consumption in 1895 had increased to 7,000,000 gallons per day, it was necessary in this year to draw 34% of the total quantity used from the river, and in order to avoid a continuation of such use of river water, to further increase the supply of ground water. Accordingly the development of the system of Boulevard wells was undertaken in 1895, and an amount of water obtained which, in combination with the Cook system, was sufficient to supply the City without the use of river water.

The City having apparently solved the problem of obtaining a sufficient supply of ground water was, however, soon confronted by the gradually depreciating quality of these supplies. In 1895 the State Board of Health had called attention to the rapid increase of ammonias and iron in the Cook Well supply. In 1898 complaints of the corrosive action of the water on metals and of lead poisoning due to its effect on lead service pipes became pronounced. The State Board of Health accordingly undertook a special investigation, the results of which are described in the 1898 report of this Board. In a letter dated June 29, 1899, to the Lowell Water Board, the State authorities advise that the action on lead is due to carbonic acid in the water, and that the Cook well water contains more of this acid than any other in the State. In a later communication, dated September 25, 1899, the State Board calls attention to the fact that, since its first letter, thirty-three new cases of lead poisoning, many of them severe, had been reported. The letter reads: "Nowhere else in the State do we find a public water supply acting so rapidly upon lead pipe, and with such pernicious results; and we

advise that measures be taken without further delay to prevent the continued use for drinking and cooking of this water drawn through lead pipe." The communication ends as follows: "To guard against lead poisoning to an appalling extent in the City of Lowell, two courses appear to be at hand—one is to remove the lead service pipes through which water from the Cook and Hydraulic wells is drawn for drinking and cooking, and the other is to cease using the Cook and Hydraulic well water and extend the Boulevard system to supply the whole city. The public health requires that one or the other remedy be supplied as soon as possible."

With the use of the Cook well system thus condemned, it became necessary to further develop the Boulevard wells, and in 1900-1901 177 additional wells were driven, and such a supply obtained that in 1902 and 1903 no water was drawn from the Cook system. With continued use, however, the amount of water obtainable from the Boulevard wells rapidly lessened, and it has been necessary in each year since 1903 to draw from the Cook well supply for short periods—despite the advice of the State Board—the amounts so taken varying from 3.2% in 1904 to 19.4% of the total consumption in 1911. In this latter year, in an endeavor to increase the amount obtainable, 118 more wells were driven at the Boulevard and at the present time 450 wells are available for use in this system. Even with this development the amount of water obtainable will not be sufficient to supply the city during the coming summer.

I have been advised that the falling off in the capacity of the wells at the Boulevard is due to deposits of organic matter and iron in the underlying ground sur-

rounding the wells, and in the well points, and that this condition is the result of overworking the ground intervening between the wells and the river.

It appears evident, as is indicated by the variation in the temperature of the water which rises and falls with the temperature of the river water, that the greater portion of the supply drawn from the wells comes from the river through the ground. With the gradually increasing draft, this intervening ground is being overworked, and as a result of this overworking, the amount of iron in the water is gradually increasing. This increase is well indicated by the reports in the State Board of Health, and while in 1896 the iron is reported to have equalled .0098 parts per 100,000, an increase of thirty times had occurred in 1911, raising it to .2379 parts per 100,000. The results of this iron in the Boulevard water are known to every consumer in the city, and need no comment here. The water is not suitable for laundry use, and after any disturbance in the pipe system, the loosening of the accumulated deposits renders it dirty and disagreeable in appearance. The expense to the department in cleaning out services and meters which have been stopped up by these deposits is large, amounting to at least \$4,000 annually.

Here, then, is the situation: A city with two ground water supplies, one condemned because of its action on lead pipes, and the other insufficient in quantity and containing so much iron as to make it far from a suitable municipal supply. Something must be done at once, and the question is to determine the best and cheapest method of improving existing conditions.

I am advised that both supplies can be treated at small expense so as to render them entirely acceptable, this to

be accomplished by reducing the carbonic acid in the Cook well water so as to prevent action on lead and by aerating and filtering at high rates the Boulevard water so as to remove the iron. Obviously, if this is true, and by such treatments these supplies in which a large amount of money has been expended, can be made in every way fit for the continued use of the city, a most valuable and necessary result will have been obtained.

It is proposed, therefore, to install small experimental plants at both the Cook and Boulevard stations to try out the proposed methods, co-operating with the State authorities, who will make the necessary analyses to determine the success of the work done. In this way all risk of failure will be eliminated, and the information required for the construction of the works for the treatment of the entire supply will be obtained.

By effecting the necessary improvements in the Cook and Boulevard supplies, so that both sources can be used, sufficient water for the city for some time will be made available. If this cannot be done, some other method of obtaining a suitable water supply must be developed, and the expense will, without doubt, be greater than that necessary for the improvement of the present supplies.

Full particulars of the general work of the Department will be found in the reports which follow.

Respectfully submitted,

ANDREW E. BARRETT,

Commissioner of Water  
Works



# FINANCIAL STATEMENT, LOWELL WATER WORKS, 1912

TABLE I	CHARGES				RECEIPTS BY ACCOUNTS			
	WATER			Total Charges	Receipts	Discounts	Abatements	Due
	Rate	Metered	Total					
Transfer.....	.....	.....	.....	\$ 5,332.79	\$ 2,745.34	.....	\$ 644.50	\$1,942.95
January.....	.....	\$ 34,326.51	\$ 34,326.51	\$ 3,210.89	34,064.40	\$ 3,302.22	98.05	72.73
April.....	.....	51,441.18	51,441.18	6,018.16	52,484.26	4,816.53	73.76	84.79
May.....	\$20,756.53	.....	20,756.53	.....	18,823.16	1,678.92	90.45	164.00
July.....	218.67	72,109.96	72,328.63	8,632.34	70,056.82	6,704.23	69.42	4,130.50
October.....	403.03	57,087.01	57,490.04	6,243.84	56,379.72	5,469.31	189.39	1,695.46
Interest and Premium on Bonds.....	.....	.....	.....	.....	841.18	.....	.....	.....
TOTAL	\$21,378.73	\$214,964.66	\$236,342.89	\$24,105.23	\$235,394.88	\$21,971.21	\$1,165.57	\$8,097.43



# FINANCIAL STATEMENT—LOWELL WATER WORKS, 1912, OUTGO.

TABLE II	Pay Roll and Salaries	Water Works Supplies	Interest and Principal	Refund and Vacancies	General Expenses	Stable	Coal	Engineer- ing	TOTAL 1912	TOTAL 1911
Jan.....	\$5,284.44	\$1,044.43	.....	\$ 3.72	\$ 79.96	\$ 275.64	\$1,477.15	. . . . .	\$ 8,165.34	\$ 10,104.48
Feb.....	5,270.44	460.16	\$2,000 00	5.00	173.17	52.95	1,122 06	.....	9,083 78	10,186.25
March.....	6,226 74	940.27	360.00	.....	265.72	399.92	2,812.60	.....	11,005.25	15,403.44
April.....	5,302.06	13,282.96	100.00	22.55	79.55	158.77	1,303.07	\$387 10	20,636.06	17,520.58
May.....	6,176.89	1,565.13	18,538.44	237.41	137.36	38 80	1,171.60	.....	27,865.63	38,836.02
June... ..	8,390.90	2,745.07	1,540.00	10.22	343.15	216.53	994.84	.....	14,240.71	12,087.20
July.....	6,018.77	2,020.52	1,480.00	25.42	115.66	377.42	696.03	238.61	10,972.43	20,722.46
August....	6,817.77	2,761 26	11,880.00	43.87	239.10	683.29	1,539.51	.....	23,964.80	16,497.97
Sept.....	5,697.98	1,198.85	100.00	25.54	158.90	373.98	2,691.41	.....	10 246.66	14,296.80
Oct.....	6,116.73	1,647.04	20.00	21.45	73.54	560.01	761.96	13.55	9,214.28	13,917.53
Nov... ..	7,583.06	933.42	21,478.44	26.80	132.03	107.23	400.47	.....	30,661 45	34,224.92
Dec.....	5,674.66	1,329.75	8,140.00	.....	61.10	321.66	.....	185.85	15,713.02	25,391.65
TOTAL	\$74,560.44	\$29,928.86	\$65,636.88	\$421.98	\$1,859.24	\$3,566.20	\$14,970.70	\$825.11	\$191,769.41	\$229,189.30

# FINANCIAL STATEMENT—LOWELL WATER WORKS, 1912.

## SUB-DIVISION OF "OTHER THAN WATER CHARGES" FROM TABLE I.

TABLE III	Meters Sold	Expense Setting Meters	Expense Repairs to Meters	New Services	Changed Services	Shut-Off Fees	Interest	Labor and Material	TOTAL 1912	TOTAL 1911
Jan. ....	\$1,257.57	\$204.73	\$ 291.11	\$ 514.94	\$ 528.63	\$ 2.00	.....	\$ 411.91	\$ 3,210.89	\$ 5,977.51
Apr. ....	537.37	174.93	508.30	522.08	110.62	4.00	.....	4,160.86	6,018.16	2,361.67
July ....	728.95	133.92	456.16	842.53	706.20	6.00	\$348.70	5,409.88	8,632.34	6,273.91
Oct. ....	1,440.51	347.27	400.56	972.54	580.36	2.00	.....	2,500.60	6,243.84	7,973.56
TOTAL	\$3,964.40	\$860.85	\$1,656.13	\$2,852.09	\$1,925.81	\$14.00	\$348.70	\$12,483.25	\$24,105.23	\$22,586.65

# FINANCIAL STATEMENT—LOWELL WATER WORKS, 1912. SUB-DIVISION OF "PAY ROLL AND SALARIES" FROM TABLE II.

TABLE IV.	Meter Work	Office and Officials	Extension and Con- struction	Central- ville P. S.	Boulevard P. S.	Cook P. S.	New Services	Changed Services	General Maintenance	TOTAL 1912	TOTAL 1911
Jan.....	\$ 356 06	\$1,014 67	\$ 57 54	\$ 603 39	\$ 576 87	\$ 200 00	\$ 57 00	\$ 6 00	\$ 2,402 91	\$ 5,284 44	\$ 7,468 76
Feb.....	324 75	1,046 40	.....	579 22	558 54	478 32	195 25	.....	2,077 96	5,270 44	7,006 02
Mar.....	315 10	1,308 00	.....	717 57	677 55	365 25	265 33	26 00	2,551 94	6,226 74	7,098 05
April.....	281 37	1,046 40	703 96	601 47	557 12	48 91	290 89	162 11	1,629 83	5,302 06	10,605 47
May.....	306 37	983 13	493 67	625 39	529 29	153 34	399 74	441 00	2,244 96	6,176 89	9,068 83
June.....	417 90	1,181 46	724 80	741 32	701 11	193 79	836 59	665 12	2,928 81	8,390 90	8,069 28
July.....	357 62	898 77	211 41	602 39	578 37	399 59	503 88	361 56	2,105 18	6,018 77	11,694 56
Aug.....	602 78	1,097 10	.....	747 65	679 05	360 25	427 35	196 07	2,707 52	6,817 77	10,877 57
Sept.....	328 13	877 68	443 46	596 97	520 12	.....	306 10	146 36	2,479 16	5,697 98	10,557 08
Oct.....	337 80	877 63	761 56	588 39	539 71	.....	623 45	356 60	2,031 54	6,116 73	9,073 78
Nov.....	469 91	1,097 10	300 46	741 15	689 85	.....	740 06	317 08	3,227 45	7,583 06	9,849 59
Dec.....	400 64	943 78	151 38	693 31	617 08	.....	394 00	131 50	2,312 97	5,674 66	11,486 87
TOTAL	\$4,498 43	\$12,372 17	\$3,848 24	\$7,838 22	\$7,254 66	\$2,199 45	\$5,039 64	\$2,809 50	\$28,700 23	\$74,580 44	\$112,875 86

TABLE V.  
FINANCIAL STATEMENT  
LOWELL WATER WORKS, 1912.

SUB-DIVISION "WATER WORKS SUPPLIES" FROM TABLE II.

Pumping Station Supplies.....	\$ 1,901 04
Cast Iron Pipe.....	14,698 77
Hydrants, Gates, and Boxes.....	2,530 62
Small Pipe and Boxes.....	2,111 68
Meters. ....	5,562 76
Machinery and Tools.....	452 14
Miscellaneous.....	2,671 85
	<hr/>
	\$29,928 86

TABLE VI.  
FINANCIAL STATEMENT  
LOWELL WATER WORKS, 1912.

DETAIL OF "PRINCIPAL AND INTEREST" FROM TABLE II.

TABLE VI.	Amount Debt Jan. 1, 1912	Rate	Interest Paid 1912	Paid on Principal 1912	Amount Debt Jan. 1, 1913	Date of Maturity
Bonds.....	\$1,000,000 00	4	.....	.....	\$1,000,000 00	1920
33 Coupons No. 42 Nov. 1, 1911.	.....	.....	\$ 660 00	.....	.....	
972 Coupons No. 43 May 1, 1912.	.....	.....	19,440 00	.....	.....	
950 Coupons No. 44 Nov. 1, 1912.	.....	.....	19,000 00	.....	.....	
Loan for Pumps	54,000 00	4	.....	\$ 6,000 00	\$18,000 00	1920
Wigginville Ext	13,500 00	4½	.....	2,700 00	10,800 00	1916
New Mains, Reservoir P. S. etc.	100,000 00	4	.....	10,000 00	90,000 00	1921
New Mains, Reservoir P. S. etc.	.....	4	.....	.....	75,000 00	1922
Sundry Persons	.....	.....	7,836 88	.....	.....	
TOTAL	\$1,167,500 00		\$46,936 88	\$18,700 00	\$1,223,800 00	

TABLE VII.  
FINANCIAL STATEMENT  
LOWELL WATER WORKS, 1912.  
MAINTENANCE.

Paid for Labor and Salaries

Office and Officials....	\$12,372 17
Pumping Stations.....	17,292 33
Water Works.....	4,498 43
Engineering.....	825 11
General Maintenance.....	31,509 63
	<hr/>
	\$66,497 67

Paid for Material

Output as per Stockbook.....	\$ 4,453 28
Water Works Supplies.....	4,983 23
Pumping Station Supplies.....	1,901 04
Stable.....	3,566 20
Coal.....	14,970 70
Interest .	46,936 88
	<hr/>
	\$76,811 33    \$143,309 00

CONSTRUCTION

Paid for Labor.....	\$ 8,887 88
Output as per Stockbook.....	5,787 35
Payment on Loans.....	18,700 00
	<hr/>
	\$33,375 23



TABLE VIII.  
FINANCIAL STATEMENT  
LOWELL WATER WORKS, 1912.

LOAN FOR NEW WELLS, RESERVOIR, PUMPING STATION AND  
MAINS.

Balance January 1, 1912.....	\$ 76,781 01
Additional Loan .....	75,000 00
	<hr/>
	\$151,781 01

Expended for Mains 1912... ..	\$15,249 23	
Reservoir.....	64,183 06	
Pumping Station.....	20,746 81	
Mains.....	27,042 73	
	<hr/>	127,221 83
Balance January 1, 1913.....	\$ 24,559 18	

# Report of the City Engineer

---

OFFICE OF THE CITY ENGINEER,

LOWELL, MASS., JANUARY 1, 1913.

*To the Commissioner of Water Works and Fire Protection:*

Dear Sir:

I have the honor to submit the Fortieth Annual Report for the year ending December 31, 1912.

## PUMPAGE

Total Net Pumpage for 1912 .....	1,966,684,536 gallons
Total Net Pumpage for 1911 .....	1,922,567,017 gallons
Increase in 1912 .....	44,117,519 gallons

## CONSUMPTION

Consumption in 1912.....	1,965,202,126 gallons
Consumption in 1911.....	1,924,537,162 gallons
Increase in 1912.....	40,664,964 gallons

The maximum pumpage for any one day was on Saturday, August 24th, viz.:

At West Sixth Street Station .....	6,427,867 gallons
At Cook Wells Station .....	3,029,440 gallons

---

Total.....	9,457,307 gallons
------------	-------------------

The maximum pumpage for one week was of the week of July 10th to July 16th, viz.:

At West Sixth Street Station .....	31,375,100 gallons
At Cook Wells Station .....	23,211,200 gallons
Total.....	54,586,300 gallons

High Service Pumpage for 1912.....	67,400,718 gallons
High Service Pumpage for 1911.....	79,988,146 gallons
Decrease in 1912....	12,587,428 gallons

Cost of Low Service Pumpage in 1912, \$14.86 per million gals.	
Cost of Low Service Pumpage in 1911, \$16.91 per million gals.	
Decrease in 1912 .....	\$2.05 per million gals.

Cost of High Service Pumpage in 1912, \$13.37 per million gals.	
Cost of High Service Pumpage in 1911, \$14.83 per million gals.	
Decrease in 1912 .....	\$1.46 per million gals.

Cost of Low Service Pumpage, exclu- sive of Cook Wells, in 1912,.....	\$14.65 per million gals.
--	---------------------------

Total Cost of High Service Pumpage (Cost of Low Service plus Cost of High Service, exclusive of Cook Well) in 1912 .....	\$28.02 per million gals.
---	---------------------------

Total Cost of High Service Pumpage (Cost of Low Service plus Cost of High Service, exclusive of Cook Wells) in 1911. ....	\$31.57 per million gals.
--	---------------------------

Decrease in 1912.....	\$3.55 per million gals.
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TABLE SHOWING QUANTITY PUMPED EACH MONTH AT THE SEVERAL STATIONS DURING THE YEAR 1912

Months	PUMPING STATIONS											Grand Totals	Net Totals
	DRIVEN WELLS					WEST SIXTH STREET							
	Cook Wells	Pawtucket Boulevard Wells			Totals	Net Totals	Worthing-ton High Duty	Worthing-ton Duplex	Allis Chalmers	Totals Low Service	High Service		
		Lower	Upper	Totals									
Jan.....	44,769,280	147,711,623	.....	.....	192,480,903	44,769,280	.....	.....	152,617,685	152,617,685	3,002,132	348,100,720	197,386,965
Feb....	79,416,960	108,655,175	.....	.....	188,072,135	79,416,960	.....	.....	111,639,811	111,639,811	2,992,920	302,764,866	191,116,771
March...	42,441,856	117,240,920	.....	.....	159,682,776	42,441,856	.....	15,440,480	106,915,389	122,355,869	2,954,700	284,993,345	164,797,725
April....	18,607,680	95,670,406	22,627,032	.....	136,905,118	18,607,680	.....	.....	118,542,379	118,542,379	3,047,436	258,494,933	137,150,059
May.....	21,030,400	110,093,169	.....	.....	131,123,569	21,030,400	.....	16,755,810	115,420,951	132,176,761	2,663,346	265,963,676	153,207,161
June....	33,087,360	106,534,879	.....	.....	139,622,239	33,087,360	.....	.....	133,086,938	133,086,938	4,282,048	276,971,225	166,174,298
July.....	88,452,416	74,442,479	12,725,854	.....	175,620,749	88,452,416	.....	41,770,020	69,502,508	111,272,528	6,836,130	293,729,407	199,724,944
August..	81,760,384	71,866,256	12,005,678	.....	165,632,318	81,760,384	.....	.....	91,482,783	91,482,783	8,025,920	265,141,021	173,243,167
Sept. ....	.....	143,056,869	.....	.....	143,056,869	.....	.....	22,208,710	125,676,774	147,885,484	8,279,516	299,221,869	147,885,484
Oct.....	.....	144,312,068	.....	.....	144,312,068	.....	.....	.....	143,263,312	143,263,312	8,661,014	296,236,424	143,263,312
Nov.....	.....	138,002,024	.....	.....	138,002,024	.....	.....	5,662,770	134,113,385	139,781,155	8,684,620	286,467,739	139,781,155
Dec.....	.....	150,669,475	.....	.....	150,669,475	.....	.....	.....	152,953,495	152,953,495	7,990,906	311,613,876	152,953,495
Totals	409,566,336	1,408,255,343	47,355,564	1,455,613,907	1,865,180,243	409,566,336	.....	101,837,790	1,455,280,410	1,557,118,200	67,400,718	3,489,699,161	1,966,684,536

TABLE SHOWING SOURCE OF SUPPLY, QUANTITY PUMPED, AND COST OF PUMPING AT THE SEVERAL STATIONS DURING THE YEAR 1912.

PUMPING STATIONS	SOURCE OF SUPPLY—WELL WATER					COST	
	479 Driven Wells at Pawtucket Boulevard	210 Driven Wells in Valley of River Meadow Brook	Distributing Mains of Low Service System	Totals in U. S. Gallons	Totals	Per Million Gallons	
West Sixth Street—Low Service.....	1,557,118,200	.....	.....	1,557,118,200	\$11,452.66	\$ 7.35+	
—High Service .....	.....	.....	67,400,718	67,400,718	900.97	13.37—	
Cook Wells.....	.....	409,566,336	.....	409,566,336	6,407.64	15.64+	
Lower Boulevard .....	1,408,255,343*	.....	.....	1,408,255,343	10,746.56	7.63+	
Upper Boulevard .....	47,358,564*	.....	.....	47,358,564	612.80	12.94—	
Total Pumpage.....	.....	.....	.....	3,489,699,161	30,120.63	8.63+	
Deduct Quantity } at lower and upper Boulevard Pumped } by High Service	1,455,613,907*	.....	67,400,718	1,523,014,625	.....	.....	
Net Pumpage .....	.....	.....	.....	1,966,684,536	30,120.63	* 15.32—	
Cost exclusive of High Service.....	.....	.....	.....	1,966,684,536	29,219.66	14.86—	
Cost exclusive of High Service and Cook Wells...	.....	.....	.....	1,557,118,200	22,812.02	14.65+	
Total Cost High Service Pumpage.....	.....	.....	.....	67,400,718	1,888.39	28.02—	

\*Repumped at West Sixth Street Station.

The following tables, showing the performance of the engines, depth and quantity of water in the Beacon Street Reservoir and Christian Street Reservoir, average temperature of the air and water at the Beacon Street Reservoir and Christian Street Reservoir, and the average monthly and daily consumption of water, have been calculated and compiled from the records kept by the engineers and gatekeeper.

TABLE SHOWING WORK DONE WITH WORTHINGTON DUPLEX ENGINE AT  
WEST SIXTH STREET PUMPING STATION. FOR EACH MONTH  
DURING THE YEAR 1912.

MONTHS	No. of days pump- ing	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head including friction in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped in- to reservoir per lb. total coal consumed	Duty in lbs. 1 foot high coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
March.....	4	19-30	78-00	49,808	10.64	162.70	15,440,480	3,860,120	391	53,119,900	43,210,900
April.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May.....	5	17-36	88-00	54,051	10.24	162.70	16,755,810	3,851,162	465	63,077,400	49,902,200
June.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July.....	11	19-57	219-30	134,742	10.23	163.10	41,770,020	3,797,275	525	71,464,100	56,401,700
August.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
September.....	7	13-17	93-00	71,641	12.84	162.50	22,208,710	3,172,673	453	61,471,100	49,832,300
October.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November.....	2	11-30	23-00	18,267	13.24	163.40	5,662,770	2,831,385	495	67,509,800	67,509,800
December.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and Averages.....	29	17-18	501-30	328,509	10.92	162.90	101,837,790	3,511,648	473	64,235,900	51,893,100



TABLE SHOWING WORK DONE WITH ALLIS-CHALMERS ENGINE AT WEST  
SIXTH STREET PUMPING STATION, FOR EACH  
MONTH DURING THE YEAR 1912.

MONTHS	No. of days pump- ing	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head including friction in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons pumped in- to reservoir per lb. total coal consumed	Duty in lbs. 1 foot high with 100 lbs. coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	31	22-50	708-00	1,093,015	25.73	162.4	152,617,685	4,923,451	1040	140,901,100	81,955,900
February.....	29	21-39	628-00	799,970	21.23	162.6	111,699,811	3,851,718	1001	135,795,500	72,801,400
March.....	29	19-49	574-30	765,705	22.21	162.3	106,915,389	3,686,738	904	122,376,000	67,859,200
April.....	30	21-46	653-00	848,975	21.67	162.7	118,542,379	3,951,413	945	128,245,900	72,433,100
May.....	29	21-16	616-30	826,620	22.35	162.5	115,420,951	3,880,033	1154	156,511,900	90,760,700
June.....	30	23-46	713-00	953,140	22.28	162.6	133,056,998	4,436,231	1299	176,224,400	104,178,800
July.....	21	19-07	401-30	497,762	20.66	162.8	69,502,508	3,309,643	1103	149,771,700	82,102,200
August.....	23	17-32	403-15	655,180	27.08	162.2	91,482,783	3,977,512	999	135,150,300	74,312,800
September.....	26	19-37	510-00	900,070	29.41	162.6	125,676,774	4,833,722	1056	143,256,500	95,624,900
October.....	31	20-39	640-00	1,026,021	26.72	162.5	143,263,312	4,621,397	1101	149,279,400	94,025,000
November.....	29	20-41	600-00	960,527	26.68	162.4	134,118,385	4,624,772	1032	139,782,600	87,837,100
December . . .	31	22-23	694-00	1,095,420	26.31	180.3	152,953,495	4,883,984	926	139,273,100	92,901,200
Totals and Averages....	339	21-04	7141-45	10,422,405	24.32	164.2	1,455,280,410	4,292,863	1037	142,047,200	84,382,100

TABLE SHOWING WORK DONE WITH WORTHINGTON HIGH SERVICE ENGINE,  
AT WEST SIXTH STREET PUMPING STATION, FOR EACH MONTH  
DURING THE YEAR 1912.

MONTHS	Number of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head including friction in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons pumped in- to reservoir per lb. total coal consumed	Coal (in pounds) used when pumping
January.....	8	20-41	165-30	214,438	21.59	70.3	3,002,132	375,267	250	11,997
February.....	8	20-49	166-30	213,780	21.40	70.3	2,992,920	374,115	250	11,945
March.....	9	18-57	170-30	211,050	20.63	70.3	2,854,700	328,300	250	11,816
April.....	9	19-57	179-30	217,674	20.21	70.3	3,047,436	338,604	251	12,164
May.....	8	17-45	142-00	190,239	22.33	70.3	2,663,346	332,918	250	10,650
June.....	11	20-35	226-30	304,432	22.40	70.3	4,262,048	387,459	250	17,044
July.....	27	23-20	630-00	488,295	12.92	85.7	6,836,130	253,190	247	27,661
August.....	31	24-00	744-00	573,280	12.84	116.5	8,025,920	258,901	250	32,091
September.....	30	24-00	720-00	591,394	13.69	116.5	8,279,516	275,984	251	33,024
October.....	31	24-00	744-00	618,646	13.86	116.5	8,661,044	279,389	250	34,623
November.....	30	24-00	720-00	620,330	14.36	116.5	8,684,620	289,487	250	34,728
December.....	30	23-36	708-00	570,779	13.44	111.8	7,990,906	266,364	250	31,966
Totals and Averages....	232	22-55	5316-30	4,814,337	15.09	101.7	67,400,718	290,520	250	269,709

TABLE SHOWING WORK DONE WITH DEANE ENGINES AT COOK WELLS PUMPING STATION, FOR EACH MONTH DURING THE YEAR 1912.

MONTHS	Number of days pumping	Average No. of hours pumping per day	No. of hours pumping month	No. of strokes made per month	Average No. of strokes made per minute	Average head including friction in feet	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped in to distributing mains per 10 total coal consumed	Duty in lbs. 1 ft. high with 100 lbs. total coal used; no deduction for ashes or clinkers
January.....	16	22-47	729-00	639,520	15.99	170.00	44,769,280	2,798,080	216	30,628,900
February.....	29	23-52	1,384-00	1,240,890	14.94	175.90	79,416,960	2,738,516	235	34,553,000
March.....	16	21-40	693-00	663,154	15.95	179.90	42,441,856	2,652,616	252	37,748,900
April.....	7	21-09	296-00	290,745	16.37	177.20	13,607,680	2,658,240	197	29,076,500
May.....	8	21-23	342-00	323,600	16.01	180.60	21,030,400	2,628,800	235	35,436,700
June.....	13	22-37	568-00	516,990	14.65	188.90	33,087,360	2,545,182	224	35,333,700
July.....	27	22-24	1,210-00	1,382,069	19.04	181.70	88,452,416	3,276,015	248	37,596,300
August.....	24	23-50	1,144-00	1,277,506	18.61	189.90	81,760,384	3,406,683	260	41,173,500
September....										
October.....										
November.....										
December.....										
Totals and Averages....	140	22-48	6,386-00	6,399,474	16.70	180.70	409,566,336	2,925,474	239	35,977,100

TABLE SHOWING WORK DONE WITH HOLLY HIGH DUTY ENGINE (CRANK AND FLY WHEEL) AT LOWER BOULEVARD PUMPING STATION, FOR EACH MONTH DURING THE YEAR 1912.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month	Average No. of strokes made per minute	Average head including friction in feet	Quantity pumped in U. S. gallons	Average quantity pumped per day in U. S. gallons	No. gallons of water pumped to total coal consumed	Duty in lbs. with 100 lbs. coal used in pumping only; no deduction for ashes or clinkers	Duty on total coal consumed; no deduction for ashes or clinkers
January.....	31	23-03	714-40	976,154	22.76	43.60	147,711,623	4,764,891	857	31,177,200	31,177,200
February.....	29	23-06	689-45	718,049	17.87	31.70	108,655,175	3,746,730	703	18,587,600	18,587,600
March.....	31	21-31	687-15	774,788	19.35	35.80	117,240,920	3,751,965	844	25,219,600	25,219,600
April.....	24	23-25	582-00	632,239	18.75	35.10	95,670,406	3,986,267	1013	29,662,300	29,662,300
May.....	31	23-34	730-30	727,552	16.60	30.40	110,093,169	3,551,382	894	22,673,700	21,867,500
June.....	30	23-50	715-00	704,037	16.41	28.80	106,534,879	3,551,163	725	17,429,000	17,429,000
July.....	23	23-19	536-15	491,954	15.29	27.60	74,442,479	3,236,630	665	15,309,100	15,309,100
August.....	17	17-59	305-55	474,929	25.87	42.80	71,866,256	4,227,427	962	34,344,300	33,877,300
September.....	29	21-32	624-30	945,393	25.23	41.90	143,056,369	4,932,995	1064	39,864,000	39,864,000
October.....	31	20-44	642-45	953,688	24.73	47.50	144,312,068	4,655,228	1007	39,903,600	39,903,600
November.....	29	22-19	647-15	911,988	23.48	42.90	138,002,024	4,753,690	1102	39,444,900	39,444,900
December.....	31	22-38	701-30	995,701	23.66	42.10	150,669,475	4,860,306	1119	39,302,500	39,302,800
Totals and Averages....	336	22-22	7,517-20	9,306,472	20.63	37.80	1,408,255,343	4,191,236	906	28,568,000	28,466,000

TABLE SHOWING WORK DONE WITH WORTHINGTON ENGINES, AT UPPER  
BOULEVARD STATION, FOR EACH MONTH DURING THE YEAR 1912.

MONTHS	Number of days pumping	Average Number of hours pumping per day	Number of hours pumping per month	Number of strokes made per month	Average Number of strokes made per minute	Quantity pumped per month in U. S. gallons	Average quantity pumped per day in U. S. gallons	Number of gallons of water pumped into conduit per ft. Total coal consumed
January.....	.....	.....	.....	.....	.....	.....	.....	.....
February.....	.....	.....	.....	.....	.....	.....	.....	.....
March.....	.....	.....	.....	.....	.....	.....	.....	.....
April.....	7	20-34	238-00	491,892	28-47	22,627,032	3,232,433	423
May.....	.....	.....	.....	.....	.....	.....	.....	.....
June.....	.....	.....	.....	.....	.....	.....	.....	.....
July.....	6	17-40	212-00	276,649	21-75	12,725,854	2,120,976	452
August.....	5	20-18	203-00	260,993	21-43	12,005,678	2,401,136	376
September.....	.....	.....	.....	.....	.....	.....	.....	.....
October.....	.....	.....	.....	.....	.....	.....	.....	.....
November.....	.....	.....	.....	.....	.....	.....	.....	.....
December.....	.....	.....	.....	.....	.....	.....	.....	.....
TOTALS AND AVERAGES	18	19-32	703-00	1,029,534	24-41	47,353,564	2,631,031	417

TABLE SHOWING AMOUNT OF COAL USED FOR  
 WORTHINGTON DUPLEX ENGINE AT PUMPING  
 STATION, WEST SIXTH STREET,  
 DURING THE YEAR 1912.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January .....				
February .....				
March .....		39,456		39,456
April .....				
May .....	1,360	34,698		36,058
June .....				
July .....		79,534		79,534
August .....				
September .....		48,981		48,981
October .....				
November .....		11,435		11,435
December .....				
TOTALS	1,360	214,104		215,464

Gallons pumped per pound of total coal consumed = 473.



TABLE SHOWING AMOUNT OF COAL USED FOR  
ALLIS-CHALMERS ENGINE AT PUMPING  
STATION, WEST SIXTH STREET,  
DURING THE YEAR 1912.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January .....	1,000	144,757	1,000	146,757
February .....	3,200	105,186	3,200	111,586
March .....	8,080	105,921	4,300	118,301
April .....	5,600	116,469	3,400	125,469
May .....	2,200	95,580	2,200	99,980
June .....	.....	102,449	.....	102,449
July .....	3,100	54,333	5,600	63,033
August.....	6,710	79,888	5,000	91,598
September .....	2,300	116,706	.....	119,006
October .....	1,800	126,513	1,800	130,113
November.....	2,480	127,520	.....	130,000
December .....	1,930	163,271	... ..	165,201
TOTALS	38,400	1,338,593	26,500	1,403,493

Gallons pumped per pound of total coal consumed = 1,037



TABLE SHOWING AMOUNT OF COAL USED FOR  
DEANE ENGINES AT PUMPING STATION,  
COOK WELLS, DURING THE YEAR 1912.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January .....		207,310	.....	207,310
February .....		337,300	.....	337,300
March .....		168,748	.....	168,748
April .....		94,610	.....	94,610
May .....		89,420	.....	89,420
June .....		147,585	.....	147,585
July .....		356,655	.....	356,655
August .....		314,610	.....	314,610
September .....			.....	.....
October .....			.....	.....
November .....			.....	.....
December .....			.....	.....
TOTALS		1,716,238		1,716,238

Gallons pumped per pound of total coal consumed = 239

TABLE SHOWING AMOUNT OF COAL USED FOR  
HOLLY ENGINE AT PUMPING STATION, LOWER  
BOULEVARD, DURING THE YEAR 1912.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total for month, in pounds
January .....		172,342		172,342
February .....		154,600		154,600
March ... ..		138,850		138,850
April .....		94,455		94,455
May .....	4,540	123,151		127,691
June .....		146,873		146,873
July .....		111,975		111,975
August.....	1,030	74,720		75,750
September .....		134,435		134,435
October .....		143,325		143,325
November .....		125,217		125,217
December .....		134,652		134,652
TOTALS	5,570	1,554,595		1,560,165

Gallons pumped per pound of total coal consumed = 906

TABLE SHOWING AMOUNT OF COAL USED FOR  
WORTHINGTON ENGINES AT PUMPING  
STATION, UPPER BOULEVARD.

MONTHS	COAL CONSUMED			
	For starting fires, in pounds	When pumping, in pounds	For banking fires, in pounds	Total per month, in pounds
January . . . . .				
February . . . . .				
March . . . . .				
April. . . . .		53,508		53,508
May . . . . .				
June . . . . .				
July . . . . .		28,165		28,165
August. . . . .		31,970		31,970
September . . . . .				
October . . . . .				
November . . . . .				
December . . . . .				
TOTALS		113,643		113,643

Gallons pumped per pound of total coal consumed = 417

WEST SIXTH STREET PUMPING STATION,  
WORTHINGTON DUPLEX ENGINE, RUN-  
NING EXPENSES FOR THE YEAR 1912

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Pay of Engineers and Firemen .....	\$493 81
3 736-2240 tons of coal (New River, 1911) at \$4.185—.....	13 93
86 407-2240 tons of coal (New River, 1912) at \$4.652+.....	400 95
6 1521-2240 tons of coal (New River, 1912) at \$4.212.....	28 13
36 38-100 gallons of cylinder oil at \$0.355+.....	12 92
13 03-100 gallons of engine oil, at \$0.225+....	2 94
4 50-100 pounds of packing, at \$1.012.....	4 55
Repairs on engine .....	18 03
Repairs on boilers.....	7 89
Sundries .....	3 82
<b>TOTAL.....</b>	<b>\$986 97</b>

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Cost of pumping water into reservoir, per million gallons \$9 69+

Cost of pumping water one foot high, per million gallons 0 05 95-100—

WEST SIXTH STREET PUMPING STATION, ALLIS-  
CHALMERS ENGINE, RUNNING EXPENSES  
FOR THE YEAR 1912.

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Pay of Engineers and Firemen.....	\$7,023 04
21 1724-2240 tons of coal (New River, 1911)	
at \$4.185— .....	91 11
563 1514-2240 tons of coal (New River, 1912)	
at \$4.652+.....	2,622 43
41 255-2240 tons of coal (New River, 1912) at	
\$4.212.....	173 17
517 38-100 gallons of cylinder oil, at \$0.355+..	183 68
185 36-100 gallons of engine oil, at \$0.225+....	41 75
107 pounds of packing at \$0.986+.....	105 54
Repairs on engine.....	58 42
Repairs on boilers .....	112 24
Sundries.....	54 31

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TOTAL ..... \$10,465 69

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Cost of pumping water into reservoir, per million gallons \$7.19+

Cost of pumping water one foot high, per million gallons 0.04 33-100—

WEST SIXTH STREET PUMPING STATION,  
HIGH SERVICE ENGINE,  
RUNNING EXPENSES FOR THE YEAR 1912

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Pay of Engineers and Firemen.....	\$321 37
4 410-2240 tons of coal (New River, 1911) at \$4.185—.....	17 51
108 693-2240 tons of coal (New River, 1912) at \$4.652+.....	503 90
7 2046-2240 tons of coal (New River, 1912) at \$4.212....	33 37
23 67-100 gallons of cylinder oil, at \$0.355+.....	8 40
8 48-100 gallons of engine oil, at \$0.225+.....	1 91
4 pounds of packing, at \$1.012—.....	4 05
Repairs on engine.....	2 88
Repairs on boilers.....	5 14
Sundries .....	2 48
<b>TOTAL...</b>	<b>\$900 97</b>

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Cost of pumping water into reservoir, per million gallons \$13 37—

Cost of pumping water one foot high, per million gallons 0 13 14-100+

COOK WELLS PUMPING STATION,  
DEANE ENGINES,  
RUNNING EXPENSES FOR THE YEAR 1912.

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Pay of Engineers and Firemen.....	\$2,199 45
175 260-2240 tons of coal (New River, 1911) at \$4.35+.....	761 75
572 336-2240 tons of coal (New River, 1912) at \$4.776—....	2,732 53
18 2042-2240 tons of coal (New River, 1912) at \$4.608+....	87 15
121 gallons of cylinder oil, at \$0.35 .....	42 35
20 gallons of engine oil, at \$0.195.....	3 90
50 gallons of kerosene oil, at \$0.10.....	5 00
12 50-100 pounds of grease, at \$0 16.....	2 00
56 50-100 pounds of packing, at \$1.20.....	67 63
Repairs on engine.....	72 53
Repairs on boilers.....	327 58
Electric lighting of works.. ..	68 18
Sundries.....	37 59
<b>TOTAL.....</b>	<b>\$6,407 64</b>

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Cost of pumping water into distributing mains, per one million gallons.....	\$15.64+
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LOWER BOULEVARD PUMPING STATION,  
 HOLLY ENGINE,  
 RUNNING EXPENSES FOR THE YEAR 1912.

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Pay of Engineers and Firemen.....	\$ 7,037 02
22 1820-2240 tons of coal (New River, 1911) at \$4.781+...	109 08
593 930-2240 tons of coal (New River, 1912) at \$4.714—...	2,797 19
80 615-2240 tons of coal (New River, 1912) at \$4.347+....	348 96
415 55-100 gallons of cylinder oil, at \$0.347.....	144 44
251 23-100 gallons of engine oil, at \$0.195+.....	49 07
6 25-100 pounds of packing, at \$1.07+.....	6 67
Repairs on engine.....	182 83
Repairs on boilers.....	36 78
Sundries.....	34 50
<b>TOTAL.....</b>	<b>\$10,746 56</b>

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Cost of pumping water into conduit per million gallons \$7.63+

UPPER BOULEVARD PUMPING STATION,  
WORTHINGTON ENGINES,  
RUNNING EXPENSES FOR THE YEAR 1912.

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Pay of Engineers and Firemen.....	\$217 64
50 1643-2240 tons of coal (New River, 1908) at \$4.455+.....	226 04
12 85-100 gallons of cylinder oil at \$0 347.....	4 47
7 77-100 gallons of engine oil at \$0.195+.....	1 52
50 gallons of kerosene oil, at \$0.10.....	5 00
4 pounds of packing, at \$1.07.....	4 28
Repairs on boilers.....	143 85
Sundries.....	10 00
<b>TOTAL.....</b>	<b>\$612 80</b>

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Cost of pumping water into conduit per million gallons \$12.94—

## RESERVOIR, BEACON STREET

MONTHS	Depth in feet	Quantity in U. S. Gallons	Temperature in degrees	
			Of Water	Of Air
January .....	18.69	28,313,381	55.65	19.80
February .....	17.65	26,591,182	52.19	26.63
March .....	18.45	27,909,124	49.77	34.42
April .....	17.48	26,317,652	46.37	46.67
May .....	18.39	27,828,966	47.26	60.48
June .....	16.86	25,307,712	48.60	69.92
July .....	17.49	26,334,043	50.82	75.72
August .....	18.41	27,863,497	49.44	69.86
September .....	18.50	28,001,761	50.00	64.32
October .....	19.39	29,496,973	53.45	57.82
November .....	18.95	28,741,090	55.27	43.48
December .....	19.90	30,338,568	46.27	36.36

## NEW RESERVOIR, CHRISTIAN STREET

MONTHS	Elevation	Quantity in U. S. Gallons	Temperature in degrees	
			Of Water	Of Air
December .....	203.59	3,290,000	50.00	33.76

NOTE: The Christian Street Reservoir was put into use on December 8, 1912.

TABLE SHOWING THE AVERAGE MONTHLY AND  
DAILY CONSUMPTION OF WATER  
FOR THE YEAR 1912.

MONTHS	Gallons per month	Gallons per day
January .....	197,107,208	6,358,297
February .....	190,274,118	6,561,176
March .....	163,808,339	5,284,140
April .....	140,652,211	4,688,407
May .....	154,857,122	4,995,391
June .....	167,263,140	5,575,438
July .....	201,073,533	6,486,243
August .....	168,462,351	5,434,269
September .....	146,347,591	4,878,253
October .....	144,801,205	4,671,007
November .....	138,102,609	4,603,420
December .....	152,452,699	4,917,829
Totals and Averages	1,965,202,126	5,369,405

The following table shows the average daily consumption of water, in gallons, for each month and each year since the installation of the system.

# AVERAGE DAILY CONSUMPTION OF WATER IN GALLONS FOR EACH MONTH AND YEAR FROM JANUARY, 1873, TO DECEMBER, 1911, INCLUSIVE.

YEARS	MONTHS												For the Year
	January	February	March	April	May	June	July	August	September	October	November	December	
1873	308,777	373,437	327,321	356,148	430,301	569,770	836,215	588,634	571,621	531,022	430,646	591,202	511,462
1874	633,810	667,770	638,840	609,470	708,760	919,830	977,360	835,820	880,880	760,560	780,060	890,220	789,206
1875	1,371,480	1,377,380	1,092,070	920,810	1,061,770	1,314,750	1,389,560	1,260,070	1,248,470	1,117,280	1,130,280	1,519,460	1,222,300
1876	1,484,980	1,427,380	1,328,790	1,073,602	1,275,180	1,554,764	2,011,640	1,662,020	1,533,326	1,348,380	1,138,370	1,805,810	1,434,882
1877	1,993,090	1,616,882	1,443,180	1,291,636	1,455,870	1,780,113	1,767,740	1,758,760	1,906,975	1,501,890	1,496,773	1,560,420	1,631,360
1878	2,038,990	1,894,890	1,683,690	1,287,310	1,824,140	1,760,330	2,262,500	1,813,970	1,878,048	1,643,400	1,515,424	1,804,850	1,784,960
1879	2,407,950	2,241,030	1,921,940	1,716,990	2,020,250	1,991,590	2,433,170	2,050,340	1,908,050	1,950,330	1,756,600	2,178,000	2,023,200
1880	1,977,760	2,144,660	1,933,610	1,839,800	2,223,670	2,486,780	2,438,080	2,492,330	2,408,940	2,268,430	2,223,350	2,574,600	2,252,197
1881	3,151,280	3,054,550	2,245,410	2,222,330	2,223,590	2,281,370	2,833,080	2,472,830	2,350,290	2,205,760	2,082,790	2,158,930	2,399,168
1882	2,883,560	2,809,540	2,263,290	2,163,990	2,203,580	2,774,220	2,988,780	3,220,680	2,651,590	2,434,430	2,211,800	2,623,940	2,622,615
1883	3,341,650	3,068,900	2,893,330	2,436,600	2,730,670	2,907,920	3,185,420	3,260,750	3,111,910	2,408,160	2,374,830	3,063,920	2,862,710
1884	3,600,150	3,032,120	3,025,910	2,513,700	2,620,820	3,127,330	3,545,920	3,303,190	3,243,620	3,006,130	2,648,010	3,334,160	3,016,040
1885	4,137,730	4,324,980	3,907,890	3,103,350	3,416,380	3,903,860	4,084,170	3,922,610	4,200,049	3,394,148	3,672,885	4,180,810	3,937,650
1886	4,527,610	4,927,659	4,276,024	3,707,956	4,222,327	4,500,456	4,522,064	4,320,440	4,367,616	4,378,843	3,925,447	4,501,287	4,319,164
1887	5,470,290	4,762,659	5,305,426	4,213,317	4,241,156	4,836,459	4,808,093	4,769,079	4,668,705	4,349,478	4,266,827	4,560,882	4,633,165
1888	6,611,570	6,707,935	6,495,132	4,344,194	4,516,328	4,738,913	4,919,078	4,553,936	5,671,520	5,380,569	5,074,790	5,671,367	5,379,536
1889	5,034,449	5,049,437	5,668,225	4,697,240	4,692,172	5,234,919	6,101,724	6,467,698	6,179,573	5,747,054	5,661,719	5,823,698	5,919,692
1890	6,346,284	6,049,030	6,888,225	5,292,180	5,530,909	6,076,131	6,191,190	6,467,698	6,336,374	6,290,239	5,899,565	6,074,263	6,074,263
1891	5,911,281	6,614,450	6,023,591	5,340,879	5,241,053	6,371,317	6,742,737	6,460,251	6,194,761	6,415,510	5,900,053	7,325,565	6,816,943
1892	8,659,870	8,888,586	6,998,717	6,014,810	6,910,870	6,935,305	7,104,533	6,571,033	6,190,767	5,821,950	5,909,004	6,580,504	6,580,504
1893	7,288,744	7,817,660	6,988,717	6,014,810	6,154,297	7,033,375	7,032,557	6,743,446	7,153,030	6,974,267	6,249,076	7,119,614	6,922,092
1894	7,280,484	8,318,300	6,469,630	6,034,913	6,452,212	7,033,375	7,032,557	6,743,446	7,153,030	6,974,267	6,249,076	7,119,614	6,922,092
1895	8,347,435	7,953,637	6,645,162	6,723,680	7,034,685	7,033,375	7,032,557	6,743,446	7,153,030	6,974,267	6,249,076	7,119,614	6,922,092
1896	7,422,485	7,050,332	6,498,264	6,187,508	6,401,053	6,296,707	6,885,239	6,353,953	6,348,176	6,301,085	6,493,027	6,898,918	6,594,364
1897	7,769,816	7,244,795	6,232,698	6,202,828	6,395,113	6,612,048	7,143,828	6,970,647	6,743,119	6,300,015	6,128,699	6,965,349	7,264,864
1898	7,417,719	8,114,248	6,803,182	6,554,963	6,551,731	8,508,104	8,664,229	7,196,128	7,002,017	7,037,015	6,757,952	7,854,543	7,893,331
1899	7,511,163	8,197,419	6,024,115	7,665,888	7,784,911	8,037,993	8,696,111	8,268,596	8,138,836	7,386,297	7,292,997	7,844,543	7,893,331
1900	8,266,601	9,055,112	6,260,895	6,914,082	6,580,172	7,083,342	7,263,392	6,766,772	6,514,839	6,183,266	6,197,726	7,039,631	7,039,631
1901	6,171,220	6,114,804	5,797,401	5,446,046	5,797,401	6,217,117	6,063,104	5,968,910	5,461,552	5,107,318	4,771,831	5,969,016	5,793,395
1902	6,160,966	5,115,198	5,115,198	5,147,423	5,881,332	5,124,402	5,563,775	5,018,208	4,356,025	4,804,428	4,613,355	5,112,584	5,266,823
1903	6,655,276	7,188,622	5,559,404	4,791,851	5,220,707	5,562,332	5,576,895	5,136,152	5,417,024	4,590,185	4,580,887	5,257,670	5,485,323



AVERAGE DAILY CONSUMPTION OF WATER IN GALLONS, FOR EACH MONTH AND YEAR  
FROM JANUARY, 1873 TO DECEMBER 1911, INCLUSIVE—Continued

YEAR	MONTHS												For the Year
	January	February	March	April	May	June	July	August	September	October	November	December	
1905	5,777,996	6,857,608	5,525,104	5,316,825	5,283,217	5,152,313	5,555,262	5,819,160	5,025,355	5,447,880	4,983,105	5,034,701	5,474,202
1906	4,834,565	5,142,265	5,001,817	4,950,731	5,025,778	5,074,773	5,391,923	5,440,761	5,486,986	4,980,724	4,398,655	5,269,259	5,083,856
1907	5,812,515	6,967,163	5,996,990	5,089,614	5,485,391	5,640,334	5,674,592	6,046,145	5,414,610	5,198,286	4,092,825	4,587,374	5,526,118
1908	4,892,197	6,303,931	5,126,110	4,847,459	4,879,046	5,597,233	6,130,861	5,027,742	5,420,568	5,637,718	4,574,252	4,607,084	5,250,367
1909	4,994,704	5,025,674	4,781,957	4,846,081	4,947,820	5,504,361	6,114,545	6,167,967	5,470,110	5,137,479	4,863,788	5,000,414	5,240,385
1910	5,527,751	5,680,827	5,110,820	5,144,907	5,188,944	5,317,145	6,521,061	6,087,138	5,563,421	5,234,485	4,787,436	5,234,080	5,442,987
1911	5,257,816	5,432,082	5,298,391	5,246,301	6,134,973	6,040,921	6,917,779	5,103,294	4,920,793	4,428,730	4,246,149	4,240,112	5,272,705
1912	6,358,297	6,561,176	5,284,140	4,688,407	4,995,391	5,575,438	6,486,243	5,434,269	4,878,253	4,671,007	4,603,420	4,917,829	5,368,405

## SUMMARY OF STATISTICS

FOR THE YEAR ENDING, DECEMBER 31, 1912.

In form recommended by the New England Water Works  
Association.

## LOWELL WATER WORKS

LOWELL, MIDDLESEX COUNTY, MASSACHUSETTS

## GENERAL STATISTICS

Population by census of 1910, 106,294.

Date of construction, 1870 to 1873.

Date of construction, High Service, 1881.

Date of construction, Driven Wells, 1893 to 1912.

By whom owned? The City of Lowell.

Source of supply: Two hundred ten (210) driven wells in  
the valley of River Meadow Brook, and four hundred  
seventy-nine (479) driven wells at Pawtucket Boulevard.

Mode of supply: Pumping to reservoir and pumping  
direct.

## PUMPING STATISTICS

## 1. Builders of Pumping Machinery.

## AT WEST SIXTH STREET STATION

One engine, capacity 5,000,000 gallons in twenty-four  
hours, Henry R. Worthington.

One engine, capacity 500,000 gallons in twenty-four  
hours, Henry R. Worthington.

One engine, capacity 10,000,000 gallons in twenty-four  
hours, Henry R. Worthington.

One engine, capacity 8,000,000 gallons in twenty-four  
hours Allis-Chalmers Company.

## AT COOK WELLS STATION, TEMPORARY PUMPS

One engine, capacity 3,000,000 gallons in twenty-four hours, The Deane Steam Pump Company.

One engine, capacity 3,000,000 gallons in twenty-four hours, The Deane Steam Pump Company.

## AT LOWER BOULEVARD STATION

One engine, capacity 3,000,000 gallons in twenty-four hours, Knowles Steam Pump Works.

One engine, capacity 8,000,000 gallons in twenty-four hours, The Holly Manufacturing Company.

## AT UPPER BOULEVARD STATION, TEMPORARY PUMPS

One engine, capacity 3,000,000 gallons in twenty-four hours, Henry D. Worthington.

One engine, capacity 3,000,000 gallons in twenty-four hours, Henry R. Worthington

2. Descriptions of fuel used:  $\left\{ \begin{array}{l} a \text{ Kind, Bituminous.} \\ b \text{ Brand of coal, New River.} \\ c \text{ Average price of coal per} \\ \text{gross ton delivered,} \\ \text{\$4.62+} \\ d \text{ Percentage of ash.} \\ e \text{ Wood, price per cord.} \end{array} \right.$

3. Coal consumed for the year, 5,273,142 pounds.

4. Pounds of wood  $\div 3$  = equivalent amount of coal.

5. Total equivalent coal consumed for the year (3) + (4)  
5,273,112 pounds.

6. Total pumpage for the year, 3,489,699,161 gallons.

7. Average static head against which Low Service pumps at West Sixth Street work, 160.40 feet.

Average static head against which pump at Lower Boulevard works, 37.80 feet.

8. Average dynamic head against which pumps work.
  - West Sixth Street, Low Service, 163.90 feet.
  - West Sixth Street, High Service, 101.70 feet.
  - Lower Boulevard..... 37.80 feet.
  - Cook Wells..... 180.70 feet.
9. Number of gallons pumped per pound of equivalent coal (5) = 662.
10. Cost of pumping per million gallons, figured on pumping station expenses viz., \$30,120.63, \$8.63+

## STATISTICS OF CONSUMPTION OF WATER

1. Estimated total population at date, 106,294.
2. Estimated population on lines of pipe, 106,294.
3. Estimated population supplied, 106,294.
4. Total consumption for the year, 1,965,202,126 gallons.
5. Passed through meters, 1,151,544,637 gallons.
6. Percentage of consumption metered, 58.60.
7. Average daily consumption, 5,369,405 gallons.
8. Gallons per day to each inhabitant, 50.5 gallons.
9. Gallons per day to each consumer, 50.5 gallons.
10. Gallons per day to each tap, 414.5 gallons.
11. Cost of supplying water per million gallons, figured on total maintenance, (item C. C.) \$49.04.
12. Total cost of supplying water per million gallons, figured on total maintenance and interest on bonds, \$72.92.

STATISTICS RELATING TO DISTRIBUTION  
SYSTEM.

## MAINS.

1. Kind of pipe, cast iron.
2. Sizes, 4 inches to 30 inches.
3. Extended 15,743 feet during the year.
5. Total now in use, 150.37 miles.
8. Length of pipe less than 4 inches diameter, 2 miles, more or less.
9. Number of hydrants added during the year (public and private,) 12.
10. Number of hydrants (public and private,) now in use, 1,382.
11. Number of stop gates added during the year, 66.
12. Number of stop gates now in use, 1,737.
13. Number of stop gates smaller than 4 inches, 32.
14. Number of blow-offs, 34.
15. Range of pressure on mains, 17 lbs. to 72 lbs., Low Service.

## SERVICES.

16. Kind of pipe, lead, lead-lined iron, iron and tin-lined iron.
17. Sizes,  $\frac{5}{8}$ " to 2".
18. Extended, 10,459 feet.
20. Total now in use, 97.43 miles.
21. Number of Service Taps added during the year, 258.
22. Number now in use, 12,952.
23. Average length of service, 36.5 feet.
24. Average cost of service for the year, \$20.51.
25. Number of meters added, 356.
26. Number now in use, 10,571.
27. Percentage of services metered, 81.6
28. Percentage of receipts from metered water ( $B \div C$ ), 91.2.

## FINANCIAL STATISTICS, 1912

## RECEIPTS

Balance January 1, 1912, Special		
Loans from Water Rates.....		\$ 76,781 01
A. Fixture Rates.....	\$ 16,873 56	
B. Meter Rates.....	189,540 39	
C. Total from Consumers.....		206,413 95
F. For Street Watering.....	1,800 00	
G. For Public Buildings.....	4,232 57	
J. Total from Municipal Depts. ....		6,032 57
K. From Tax Levy.....		16,000 00
L. Loan.....		75,000 00
M. Interest and Premium on Loan.....		841 18
N. From other sources.....		22,107 18
O. TOTAL .....		\$403,175 89
P. Net Cost of Works to date.....		\$3,363,621 55
Q. Bonded Debt at date .....		1,223,800 00
R. Value of Sinking Fund at date .....		625,963 65
S. Average Rate of Interest, four per cent.		



## FINANCIAL STATISTICS 1912

## EXPENDITURES

Water Works Maintenance		
AA. Operation (Management and Repairs) .....	\$ 96,372 12	
CC. Total Maintenance.....		\$ 96,372 12
DD. Interest.....		46,936 88
(CC + DD).....	143,309 00	
EE. Payment on Loans .....		18,700 00
FF. Sinking Funds.....		16,000 00
Water Works Construction		
GG. Extension of Mains. ....	7,246 84	
HH. Extension of Services.....	7,428 39	
II. New Wells.....	15,249 23	
JJ. New Pumping Station...	20,746 81	
KK. New Reservoir . ....	64,183 06	
LL. New Mains. ....	27,042 73	
MM. Total Construction.....		141,897 06
NN. Unclassified Expenses .....		15,085 18
Overdraw 1911.....		1,967 69
Balance on Water Works.....	41,657 78	
Balance on Loans.....	24,559 18	
Total Balance .....		66,216 96
O. TOTAL .....		\$403,175 89

# Superintendent's Report

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LOWELL, MASS., January 1, 1913.

MR. ANDREW E. BARRETT,  
*Commissioner of Water Works and Fire Protection of  
the City of Lowell.*

DEAR SIR:

Following is the Report of the Superintendent of Water Works for the year ending December 31, 1912.

It was a very busy, active year for the department. Much work of a very important character was carried along to practical completion like the New Boulevard Lower Pumping Station and the New Five Million Concrete Covered Reservoir.

An important addition to and enlargement of the Boulevard Well System was also effected. Considerable progress was made in the work of extending the larger mains of the system for the purpose of better fire service and a more adequate pressure and supply for the Highlands and other elevated sections of the city.

## WATER QUALITY AND QUANTITY

In agreeable contrast to the general dissatisfaction of the previous year, only occasional complaints were received of the quality of the water last year, and such complaints as were received proved due to some local condition and were invariably remedied. Entirely shutting off Section "A" of the Boulevard Wells, operating the Cook Wells for a longer period and an increased rainfall accounted materially for the improvement, together with one hundred twenty-eight (128) new wells turned on the latter part of the year.

The work on the new wells was begun in 1911 by the laying of 500 feet of 20" suction pipe, but none of the wells were driven until the past year. The new wells were placed on three new suction lines, two of them on the north side of the Boulevard—one extending northeasterly and the other northwesterly from a 16"x14"x14" Y placed on the end of the main suction leading directly to the new Receiver in front of the new Pumping Station. The other new wells are on a 20" pipe leading from a 20"x16"x20" Tee (on the main suction line just mentioned) in a westerly direction on the south side of of the Boulevard and parallel thereto. This pipe line was made extra large to accomodate the water from the 124 wells at the upper station, replacing the 20" Bell and Spigot pipe formerly used for that purpose. This new line, like all the well suction pipe, is flanged and made together with bolts.

The old Bell and Spigot pipe consisting of 664 feet of 20" and 112 feet of 16" pipe was taken up, waste lumber from the old Pumping Station being used for melting the lead joints. Besides utilizing this new main for carrying the water from the upper wells, each length is fitted for a well connection to which fifty-three (53) wells have been already connected, leaving twenty (20) more, available in the future, if desirable.

Of the two lines on the notherly side of the Boulevard, the one running westerly is completed and draws from sixty wells. On the easterly line only fifteen wells have been attached, owing to delay in receiving pipe. When this line is all laid, thirty-eight more wells can be added.

The main suction to which these three new well lines are connected enters through a new receiver or air chamber located in the front of the Pumping Station and under the main entrance of the building. Water was let on from these new wells August 24th, and after pumping them several hours through blow-off into the river, the water amounting to 6,000,000 gallons per day was tuined into the city. The yield of these wells numbering only 98 at first was very gratifying both in amount and the characier of the water.

One of the immediate effects of the new wells was a marked decrease in the iron content—from .10 in September, 1911, to .01 in September, 1912. Samples taken the following months, however, show the iron again rising to .0400 of a part in 100,000 parts. The quantity obtainable also fell off quite rapidly from 6,000,000 gallons daily to less than 5,000,000 gallons, and this notwithstanding the fact that the number of new wells was increased to 113, and that 52 of the old wells were brought into use. This reduction in the yield of the wells, and especially the deterioration in its quality discourages the belief in the reliability and permanence of the Driven Wells for a future supply. If, however, some method is applied for removing the iron, the quantity may prove sufficient for a number of years.

The amount of water pumped from the wells at the Boulevard Plant was 1,455,613,907 gallons in 1912 against 1,472,019,019 gallons in 1911—a falling off of 16,405,112 gallons the past year. This reduction in the yield of these wells would have been considerably more if it were not for the increase from the new wells the last four months. During the coming year, pumping the new and old wells together will show a material increase in the quantity obtainable from this source, and with considerable less forcing of the wells, resulting, no doubt, in a decrease of the iron content of the water and therefore better for all uses.

Considerable of the iron in water is deposited along the walls of the conduit on its way to the Centralville Pumping Station. This was removed during the year by thorough scrubbing with brooms and washing with hose streams from nearby hydrants. The Pump Well at the Centralville Pumping Station, for the same reason, was cleaned in the same manner.

Early in January, the turbid, cloudy condition of the water in the reservoir prompted the shutting off of Section A of the Boulevard Wells which were known to be high in iron. As expected, the reservoir gradually cleared and remained so all year. Discontinuing the use of this section of the

wells, reduced the quantity obtained from the balance of the plant materially, rendering it necessary to start the Cook-Hydraulic Wells, January 16th. From that date this plant was used off and on until the new wells at the Boulevard became available August 24th.

The amount pumped from the Cook Wells Plant during the year was 409,566,336 gallons. This exceeds the pumpage of the previous year, 1911, by 54,950,464 gallons, yet, in 1911 the quantity pumped from the Cook Wells was the greatest since 1901, when in consequence of a communication from the State Board of Health, to the effect that the water had a corrosive action on lead pipes, the wells were discontinued as a regular source of supply.

## PUMPING AND PUMPING STATIONS

FOLLOWING ARE THE PUMPAGE FIGURES FOR THE YEAR:

	1912.	1911.
	GALLONS	GALLONS
Boulevard Lower Station, Holly.....	1,408,255,343	1,472,019,019
Boulevard Upper Station, ..... ..	47,358,564	
Centralville Station, Allis-Chalmers.....	1,455,280,410	752,992,475
Centralville Station, Low Duty.....	101,837,790	96,127,590
Centralville Station, High Duty.....		718,831,080
Centralville Station, High Service.....	67,400,718	79,988,146
Cook Wells Station.....	409,566,336	354,615,872
TOTAL PUMPAGE.....	3,489,699,161	3,474,574,182
Deduct boulevard and high service pumpage	1,523,014.625	1,552,007,165
Total net pumpage.....	1,966,684,536	1,922,567,017
Total net pumpage in 1911.....	1,922,567,017	
EXCESS OF 1912 VS. 1911.....	44,117,519	



### COAL CONSUMED

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	1912.	1911.
	POUNDS	POUNDS
Boulevard Lower Station, Holly.....	1,554,595	1,266,044
Boulevard Upper Station, Holly.....	113,643	
Cook Wells Station.....	1,716,238	1,545,610
Centralville Station, Allis-Chalmers .....	1,403,493	713,882
Centralville Station, Low Duty Worthington .....	215,464	225,043
Centralville Station, High Service.....	269,709	316,902
Centralville Station, High Duty Worthington.....		1,155,831
TOTAL COAL USED ..	5,273,142	5,223,312
Total coal used in 1911.....	5,223,312	
Increase in coal consumed.....	49,830	

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The foregoing figures show that the Holly Pump at the Boulevard Lower Pumping Station and the Allis-Chalmers at the Centralville Pumping Station did the great bulk of the pumping for the year. The Boulevard Upper Station, started for the first time since August, 1909, ran eighteen days—seven in April, six in July and five in August. This station and machinery are in good condition, but on account of its greater cost of pumping, has not been operated only when necessary as in this instance, when the construction work on the New Lower Station forced the shutting down of the pump there. To this same cause is also attributable some, if not all, of the increase in the amount of the coal used at both the Boulevard Stations, as shown in the preceding tables. From this table also, it can be seen that a considerable reduction was made during the year in the High Service pumpage. This is important because of the high cost of pumping into this system.



## NEW PUMPING STATION

The new Boulevard Pumping Station just completed is of hollow tile, plastered inside and outside with cement mortar, white quartz sand being used in the outer coat. The building which includes Engine Room, Boiler Room and Coal Shed is plain in design, but with its white walls and red tile roof presents a very pleasing appearance. A feature of the building is the cross section of engine room with a short span for main portion, and with alcove projections for office, bath room and oil room in front, and for auxiliary pumps and electric engine in rear. The walls and roof were constructed outside the old station before the dismantling of the old wooden building.

Patrick O'Hearn of Lowell, was the general contractor and the contract price was \$22,494.00, or \$0.14 per cubic foot volume. This price includes the brick setting of the four old boilers, but not of the moving of the boilers to a new location which was done by the department help. Space is left in the new engine room for another pump of the size of the present eight million Holly Pump. Nos. 3 and 4 boilers were retubed, and all four boilers were furnished with new mouth pieces after moving.

## NEW RESERVOIR

The Reservoir, which has recently been completed, is located near the open reservoir on a lot already owned by the City, in order to save the expense of acquiring additional land. Its water line at elevation 211.5 was made as high as possible within the limits of this land, and at the same time balance excavation and embankment. The structure, which is part in excavation and part in embankment, is of concrete, 219.75 feet long, 125.5 feet wide, with a depth of 24.0 feet from the top of the floor to the springing line of the arched roof, and has a capacity of approximately 5,000,000 gallons.

The floor is of plain concrete, 10 inches thick, laid in two layers, breaking joints, the lower layer a 1:3:6 mix, and the upper a 1:2:4 mix. The floor rises with a slope of one vertical to 3 horizontal from the general level of the bottom to the base of the side walls, lessening the necessary height of these walls to 17.5 feet above the base; as compared with 24 feet the height of piers, and effecting a material saving in the cost of reservoir per unit of capacity. The material excavated was a hardpan, practically impervious, and incompressible. The floor was, therefore, made a plain slab, without reinforcement, except under the piers, where  $\frac{1}{2}$  inch rods in both directions, spaced 12 inches on centers and 6 feet long, are placed near the lower surface.

The walls are of concrete, reinforced vertically as on inside surface as a beam, supported at the top by the roof and at the bottom by the floor, but with an outside and an inside projection of base and such reinforcement as a cantilever as would permit backfilling of the wall to a height of 15 feet before the floor and roof were placed in position, thus enabling 70 percent of the total excavation to be deposited in final location at the time of first handling. The base was first placed and the concrete in walls was then constructed in sections 40 feet long to the full height, with expansion joints formed of a folded sheet of lead between each section, and with sufficient horizontal reinforcement for temperature stresses to prevent cracking between these joints.

The reinforcement for temperature is carried around the corners, and the first expansion joint is located 20 feet each side of the corners. The lead sheets  $\frac{1}{8}$  of an inch thick and 8 inches wide projected into the concrete 4 inches each side of the joint, with a fold of 2 inches at right angles to the wall and in the plane of the joint between the sections. The joint in the concrete extended down through the base, but the steel in the base was placed continuously, while that in the walls stopped each side of the expansion joint. Before the completion of the structure, and when the temperature of the air had approached 40 degrees, all of the expansion

joints had opened, a straight line extending from the top to near the base of the wall, and varying in width from a hair crack to  $\frac{1}{16}$  of an inch.

The walls are 24 inches thick at the base, and 18 inches thick at the springing line, with a projecting lip 6 inches wide to catch the arch concrete of roof and reduce to 14 feet the span of the outside cylindrical section.

The concrete in base of walls is a 1:2½:5 mix, and above the connection with floor, a 1:2:4 mix. For size and spacing of the steel in walls, reference may be made to the plans.

The piers are 21 inches square, with a base 2 feet 6 inches high and 3 feet square at the bottom, constructed of plain concrete mixed in the proportion of 1:2:4. The piers above the base were built to the full height at one filling of the forms, and no difficulty was found in properly joggling the material to place in this depth of form, nor in maintaining the forms to true lines.

The roof is of the groined arch type, with clear spans of 14.0 feet, a rise of 36 inches, a thickness at crown of 6 inches and a depression over the pier 21 inches deep. The under side of the arch section is elliptical, the upper surface segmental.

A single 30 inch cast-iron main, 882 feet in length, extends from the pipes leading to the old reservoir, being cross connected to both force mains and the supply pipe to the distribution system, and serving as both inlet and outlet for the new reservoir. A check valve was placed in the outlet pipe from the old reservoir, thus automatically bringing this reservoir, which it is proposed to keep full and in reserve, into service, should the pressure drop below that due to its flow line. A large concrete gate chamber was constructed to contain the several gates at the junction of the new and old mains. The 30 inch pipe ends at a point a few feet inside the new reservoir at the present time, although the plan of floor and sump is such that a branch may be inserted and the line extended to the further end of the structure, and the

necessary check valves provided, so as to insure circulation, should this prove necessary.

The floor of the reservoir slopes to a sump, from which a drain pipe leads to a sewer. A circular concrete overflow wier, bracketed to the end wall with discharge pipe which cannot be closed, prevents the water from being raised higher than the intended level, the overflow discharging into the nearby uncovered reservoir.

As a matter of public policy, it was thought wise to do all excavation and construct the embankments by day labor. The reservoir was so placed as to balance excavation and embankment, the total quantity of earth work amounting to 15,000 cubic yards, of which 4,800 cubic yards were spoiled and handled a second time. The cover over the roof, including the loam is 18 inches deep, the shoulders of the embankment are 6 feet outside of the inside face of the wall, and the slopes of all high embankments are 2 horizontal to 1 vertical. The 30 inch force main and the construction of the gate chamber at the old reservoir were also done by city labor, and the gang was so frequently shifted that no attempt was made to keep a force account of the actual cost of earth work at reservoir.

The masonry work was let by contract to Cyrus Barton of Lowell, the lowest bidder. Excavation was begun in the fall of 1911, but no concrete was placed until the spring of the past year. The design of the walls, as already stated provided for the placing of the backfilling at the time of first handling. Accordingly, the first excavation was along the line of the walls to give opportunity for their construction, the core being left for subsequent removal, as the building of the walls provided a place to deposit the material without resort to spoil banks.

The contract prices for masonry were as follows: concrete in floor, \$5.50 per cubic yard, concrete in wall, \$7.95 per cubic yard, concrete in piers, \$10.00 per cubic yard, and concrete in roof, \$9.00 per cubic yard. These prices do not



include the steel reinforcement, which was furnished by the city, nor the cement furnished by the contractor, but paid for separately at the rate of \$1.45 per barrel.

The cost of the reservoir, exclusive of excavation and embankment was somewhat less than \$6,000.00 per million gallons of capacity.

Some requirements of the specifications in regard to concrete may be of interest. Cement was to fulfill the specification of the American Society for Testing Materials; sand was to be in appearance very coarse, but to contain sufficient fine grains to reduce the percentage of voids to a minimum; and the coarse aggregate was to vary in size of particle from  $\frac{1}{4}$  inch to  $1\frac{1}{2}$  inches in diameter. In mixing concrete, the right was reserved to change the proportion of sand and coarse aggregate, in order to reduce the voids so far as possible. The consistency of the mixture was to be such that it could be placed by joggling and spading, but with little or no ramming. Too much water was to be avoided, and the concrete was not to be so wet that there would be a tendency for the coarse aggregate to settle through the mixture. At all horizontal joints beveled bonding pieces were placed, the joints scrubbed with steel wire brushes to expose the aggregate before final set of the concrete occurred, and before placing additional concrete, the joint was thoroughly flushed with water.

Particular attention was paid to the requirement that all concrete should be kept wet for one week after placing, sawdust being spread over the floor and burlap hung over the walls, and both kept saturated with water. It is believed that this provision of ample water to prevent drying out of the concrete is most important in eliminating shrinkage cracks during setting.

The reservoir has been in service since December 6, 1912, supplying increased pressure to all parts of the low service system. The old reservoir has been kept full, ready for any emergency.

Cutting into the 30" distributing main for the pipe line to the new reservoir was a most difficult piece of work, as it involved the insertion of a 30" check valve, three 30" valves, and 30"x30"x30" Tee in the 30" main distribution pipe, and meant shutting the reservoir in, so that the water supplied had to be pumped directly through the street mains from the Centralville Pumping Station and the Cook Wells until the valves mentioned were set, and the distributing main again put into commission, which was done as speedily as practicable, working night and day, realizing that this makeshift arrangement for supplying the city was not very satisfactory, yet the only feasible one.

## RELAYING AND ENLARGING DISTRIBUTING MAINS

The work of replacing 12,700 feet of the smaller pipes in service with pipes of larger diameter and more carrying capacity was begun August 5th on Pawtucket Street, where, from Merrimack Street to School Street the old 8" pipe was removed and the 12" main on Merrimack Street extended along Pawtucket Street to westerly line of Arlington Street, 1,221 feet, and thence to School Street with 374 feet of 10" pipe. Three 12" and one 10" valves were also placed on this line.

On Church Street, from 16"x16"x12" Tee at Lawrence Street to Central Street 12" main, the old 12" pipe was taken up and 16" laid in its place, a distance of 1,000 feet. Two 16" valves were also set in this line, one at Lawrence Street and one at Central Street.

On Dutton Street, from the Lowell Machine Shop Gate to Fletcher Street, 504 feet of 6" pipe and 396 feet of 10" pipe were replaced by 907 feet of 16" pipe, connecting to Fletcher Street main with a new 16"x16"x16"x16" Cross.

Three 16" valves were used on this job. The old 6" pipe previously in service on Dutton Street was almost closed with mud and sediment.

The 20" main known as the corporation line which ended on Cabot Street near northerly line of Moody Street, by reducing to 12" pipe was extended to Market Street, 493 feet, thence 52 feet westerly on Market Street to Adams Street, thence southerly through Adams Street, 1201 feet, to a point beyond Cross Street. This Adams Street line was laid in a new trench partly through ledge.

On Cabot Street, the Moody Street 6" main which formerly crossed under Cabot Street main, was connected to a new 20" main. One 20" gate was set on Cabot Street and two on Adams Street. Practically all the old 12" pipe on Cabot Street was removed, but the 8" pipe on Adams Street, owing to the lateness of the season was not disturbed. In all, 5,251 feet of the 12,700 feet voted was laid and the pipe, valves and fittings for the balance of the work is on hand with the exception of 200 feet of 20" pipe necessary to carry Adams Street 20" line to Broadway. The 664 feet of 20" B & S pipe removed from the Boulevard Well Plant was all used on the Cabot Street and Adams Street work.

#### ORDINARY EXTENSION AND RELAYING OF STREET MAINS.

Aside from the pipe laid under the special loan for relaying, there was laid for ordinary street main extension, 10,492 feet. Adding the 5,281 feet special work, makes 15,743 feet laid, and deducting from this amount 1,210 feet removed, leaves a net increase of 8,033 feet of the cast iron street mains in use, or a total of High and Low Service pipe in use January 1, 1913, of 793,952 feet, or 150.37 miles.



An important part of the year's extension work was the laying of 12" pipe over the new School Street Railroad Crossing, from Western Avenue, opposite the Ramp, to School Street, thence through School Street to Middlesex Street, a distance of 1,071 feet. On account of this grade crossing work, 145 feet of 6" pipe had to be laid in Sawtelle Place, and as, for the same reason, some of the old 4" main on Payne Street had to be replaced, it was considered best, from a fire service standpoint, to replace the 4" main the whole length of the street. Accordingly, 510 feet of 8" pipe was laid, and the 4" removed. Not long after this work was done, a fire occurred on Payne Street, which, to say the least, would have been far more serious if the Fire Department was dependent on the old 4" main.

Connecting 12" mains on Thorndike Street and Chelmsford Street by a 12" pipe through Hale Street, begun in 1911, was completed during the year by laying 267 feet of 12" pipe connecting Chelmsford Street main by 12"x12"x 12"x12" cross.

In connection with the work of extending and relaying street mains, sixty six stop valves were set, making 1,737 now in use. Occasionally during the year, when water was to be shut off, valves were found defective, and considerable leakage followed, making it difficult to make lead joints as they should be, proving that the best valves are none too good when so much depends upon their satisfactory operation, as in water works service.

### HYDRANTS

The number of hydrants have been increased during the year by seven. Twenty-three (23) have been changed, nine of them from Flush to Post. All hydrants on new lines, 12" or larger, are controlled by stop gates on branch pipes, so that if a hydrant gets out of order, it will not be necessary to shut off street main to repair it. Two hundred ninety-three (293) hydrants were repaired during the year, following inspection by the Fire Department.

## HYDRANTS CHANGED 1912

TAKEN OUT	SET	STREET
Ludlow	Boston Machine	Chase Avenue
Ludlow	Pratt & Cady	Pawtucket Street
Ludlow	Pratt & Cady	Beech Street
Michigan	Corey	Varnum Avenue
Michigan	Ludlow	Varnum Avenue
Michigan	Pratt & Cady	Wilder Street
Michigan	Pratt & Cady	High Street
Michigan	Ludlow	Aiken Avenue
Boston Machine	Ludlow	Varnum Avenue
Pratt & Cady	Pratt & Cady	Beacon Street
Holyoke	Pratt & Cady	Moody Street
Corey (3)	Pratt & Cady (3)	Adams Street
Flush	Ludlow	Lawrence Street
Flush (3)	Pratt & Cady (3)	Gorham Street
Flush (3)	Pratt & Cady (3)	Church Street
Flush	Pratt & Cady	Central Street
Flush	Pratt & Cady	Davidson Street

23 hydrants changed 1912.

## FIVE HYDRANTS DISCONTINUED 1912

Bleachery Stable.....	Flush
Church Street.....	Lowrey
Sixth Avenue.....	Ludlow
Dutton Street, (On Bridge).....	Ludlow
Fletcher Street.....	Lowrey

## HYDRANTS, JANUARY 1, 1913

KIND	Flus	2 Noz.	3 Noz.	4 Noz.	Total	
Boston Machine.....			171		171	
Chapman .....		3	108	51	162	
Coffin.....			1		1	
Corey.....			37		37	
Eddy.....			32	1	33	
Fairbanks .....			19		19	
Flush.....	311				311	
Glanmorgan.....			1		1	
Kennedy. ....			1		1	
Lowrey..... 7					7	
Ludlow... ..		3	470	14	487	
Michigan .....			9		9	
O'Brien.....			1		1	
A. P. Smith....			1		1	
Perkins.....				1	1	
Walker .....			17		17	
Pratt & Cady.....			24		24	
TOTALS .....	7	311	6	892	67	1,283

## NEW HYDRANTS, 1912.

Carolyn Street.....	Pratt & Cady Hydrant
Carolyn Street.....	Pratt & Cady Hydrant
Chauncey Avenue.....	Boston Machine Hydrant
Holyrood Avenue.....	Pratt & Cady Hydrant
Plymouth Street.....	Ludlow Hydrant
St. James Street.....	Pratt & Cady Hydrant
School Street .....	Ludlow Hydrant
Troy Street.....	Pratt & Cady Hydrant
Viola Street.....	Pratt & Cady Hydrant
Webber Street.....	Pratt & Cady Hydrant
Weed Street.....	Pratt & Cady Hydrant
Western Avenue.....	Ludlow Hydrant

Twelve new hydrants set, 1912.

## SERVICES

The number of services laid, both new and renewed, the past year was about the same as the previous year, viz; 258 against 255 new services in 1911, and 296 services changed compared with 295 in 1911. The length of pipe laid, however, for new services was 1,132 feet less than in 1911.

Nine of the new services were cast iron pipe and for private fire protection, as follows: Lowell Sun Building, one 6" and 4" from Prescott Street and one 4" from Merrimack Street; New Chalifoux Building, one 4" from Merrimack Street; Grosvenor Building, one 4" from Merrimack Street; Board of Health Stable, one 6" from Cross Street; Lowell Electric Light Company, one 6" from Perry Street; American Hide and Leather Company, one 6" at New Beam House, Perry Street; Patterson Rubber Company, one 8" from Middlesex Street.

Practically all the services, both new and changed, were made of galvanized iron pipe, and during the latter part of the year nothing smaller than 1" pipe was laid.

Expended for services 1912, labor.....	\$ 7,849 04
Expended for services 1912, service pipe ...	1,331 19
Estimated cost of service cocks made in Department Shop.....	2,180 40

Total expended for services .....	\$11,360 63
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Average cost per ft. of service pipe laid \$0.64+

Total charged for services .....	\$ 4,778 40
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Average charge per ft. of service pipe laid \$0.27+

Average cost per service, labor and material,

new and changed, for 1912.. .. .	\$ 20 51
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Average cost per service for labor, digging, etc.	14 17
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Average cost per service for material.....	\$ 6 34
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Average length of new services laid in 1912, 36½ ft.

## NEW SERVICES

No.	KIND	FEET
4	¾" Tin lined iron pipe.....	124—6"
2	1" Tin lined iron pipe.....	60—2"
160	¾" Galvanized iron pipe .....	5,832—2"
62	1" Galvanized iron pipe .....	2,224—4"
10	1½" Galvanized iron pipe .....	405—4"
10	2" Galvanized iron pipe.....	467—4"
4	4" Cast iron pipe.....	96—4"
4	6" Cast iron pipe.....	101—2"
1	8" Cast iron pipe.....	19—10"
1	3" Plain iron pipe.....	85—6"
<hr/>		<hr/>
258		9,417—0

Total previously laid. ....	505,036 feet
Total now laid.....	514,453 feet
Total services laid.....	13,886
Total cut off at main.. .	1,017
Total reconnected.....	83
Total now in use ...	15,920





# SERVICES CHANGED, 1912—Continued

No.	KIND	CHANGED TO							TOTAL FEET
		Galv. ¾"	Galv. 1"	Galv. 1½"	Galv. 2"	T. L. I. 1"	T. L. I. ¾"	Lead ¾"	
1	¾" Lead....	.....	21-6	.....	.....	.....	.....	.....	21-6
1	¾" "	.....	.....	.....	.....	.....	20-6	.....	20-6
8	¾" "	196-6	.....	.....	.....	.....	.....	.....	196-6
1	¾" "	.....	.....	.....	.....	.....	.....	17-6	17-6
3	1" "	.....	26	.....	.....	.....	.....	.....	26
1	1" "	.....	.....	.....	.....	.....	9-6	.....	9-6
1	2" "	.....	.....	.....	25	.....	.....	.....	25
1	¾" T. L. I.	.....	.....	.....	.....	8	.....	.....	8
3	¾" "	.....	119	.....	.....	.....	.....	.....	119
18	¾" "	383-8	.....	.....	.....	.....	.....	.....	383-8
2	1" "	.....	50-9	.....	.....	.....	.....	.....	50-9
2	¾" L. L. I.	67-6	.....	.....	.....	.....	.....	.....	67-6
1	1½" Brass....	.....	.....	25-6	.....	.....	.....	.....	25-6
296		5892-1	1428-2	304-10	49-6	282-9	230-8	26-6	8214-6

## METERS

The number of meters in use was increased 356, or 29 less than during the previous year, but the volume of meter work greatly exceeded the previous year. This was due to the large number of meters frozen in the extreme cold weather of last January, and also to the policy inaugurated during the year of taking out all meters that have been in continuous use for ten years or more.

A 6" Hersey Detector Meter was set on the fire service of the Lowell Electric Light Company, Perry Street, and an 8" is to be set on the new fire service of the Patterson Rubber Company, Middlesex Street. An "F. M." attachment was placed on both Hersey Detector Meters of the American Hide and Leather Company, Perry Street.

Three hundred and forty six (346) of the three hundred eighty-five (385) new meters set during the past year were Worthington Disc Meters.

New Meters set . . . . .	385
Meters out for repairs . . . . .	1,608
Meters reset . . . . .	1,522
Meters condemned . . . . .	23
Meters condemned—replaced with new . . . . .	23
Meters repaired in cellars. . . . .	430
Meters frozen and burst . . . . .	325
Meters discontinued . . . . .	7
Meters sold for private use . . . . .	12

## METERS RUNNING JANUARY 1, 1913.

SIZES	$\frac{5}{8}$ in.	$\frac{3}{4}$ in.	1 in.	1 $\frac{1}{2}$ in.	2 in.	3 in.	4 in.	6 in.	8 in.	TOTAL
Columbia .....	100	3								103
Crown .....	3,208	1,654	340	25	47	7	6	5		5,292
Desper.....	14	4	3							21
Duplex.....	1		2							3
Empire .....	269	46	10	6	6	2				339
Gem .....					8		5	1		14
Hersey.....	1,423	205	20	8	4	1	2			1,663
Hersey Detector..						1	8	23	4	36
Keystone.....	61				1					62
King.....	80	3								83
Lambert.....	812	89	20	1	1					923
Nash.....	569	119	56		2					746
Niagara .....	1									1
Thomson.....	5	14	1							20
Torrent.....						1	2			3
Trident.....	572	35	1	1						609
Union.....	28	7		1						36
Watch Dog .....	5									5
Worthington .....	49	1	31	39	31	5	3			159
Worth-Disc.....	414	23	5	6	4		1			453
Total .....	7,611	2,203	489	87	104	17	27	29	4	10,571

## PRIVATE METERS RUNNING JANUARY 1, 1913.

SIZES	$\frac{3}{8}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{2}$ "	2"	Total
Columbia.....		9					9
Crown.....	1	32	24	2	1		60
Desper.....			3	1			4
Duplex.....		1					1
Empire.....		6				1	7
Frost.....		1	1				2
Hersey.....		51	4			1	56
Keystone.....				1			1
King.....		1					1
Lambert.....		21					21
Nash.....		23	2	2		1	28
Thomson.....			1				1
Trident.....		5					5
Worthington.....				1		3	4
Worthington Disc....		12	1				13
TOTAL.....	1	162	36	7	1	6	213

## MISCELLANEOUS WORK.

Following the derailment of a car load of pipe, the spur track at the Cook Wells had to be repaired, at an expense to the Department of \$270.35.

The reservoir-keeper's house and the engineer's house at the Boulevard were repainted.

The main pipe on Broadway beyond Rolfe Street froze twice last winter. It was first thawed out by the Electric Light Co., but the second time the department employees did the thawing. Several lengths of pipe, having burst, were replaced. The 8" main pipe crossing the Pawtucket bridge froze and burst necessitating new pipe the whole length of the bridge. As the same thing occurred some years before, this time the new pipe when laid was encased in three thicknesses of felt pipe covering purchased of the Johns-Manville Co., and guaranteed to protect the pipe from freezing.

Ten services frozen during the winter were lowered in the summer to a sufficient depth to prevent freezing again. Small mains in Exchange Place and Cheney Place were also lowered for the same reason.

The street mains were blown off twice during the year, besides blowing off hydrants 166 times for the purpose of cleaning and flushing the pipes and thereby improving the water when complained of. Twenty-five private sewers were flushed during the year.

To the repairing, testing and cleaning of meters, valves, pumps, etc., done at the Department Shop has been added, during the year, the vulcanizing and patching of auto tires for the Water and Fire Departments.

The usual amount of brass cocks and couplings have also been cast and finished, together with various and sundry small iron castings, viz: 5811½ lbs. brass castings and 3822 lbs. iron castings.

Twenty-five hundred feet of 2½" pipe was cut in various pieces and threaded for the new wells, and one hundred strainers were also made at the shop for the same purpose.

The 30" drinking fountain, formerly set on Bridge Street, near First Street was moved to First Street, opposite Varnum Park.

### CONCLUSION.

During the year the Department lost the services of a faithful employee in the death of Dennis J. Crowley, for over twenty years a clerk at the Water Works Yard.

I wish to acknowledge my indebtedness to F. H. Barbour, Engineer on the New Reservoir construction, for the description of the same used in this report.

In conclusion it gives me great pleasure to express to you my sincere appreciation for your uniform courtesy and kindness during the year.

Respectfully submitted,

ROBERT J. THOMAS,  
Superintendent.



# LOW SERVICE—WATER PIPE LAID DURING 1912

Street	LOCATION	Length of Pipe in Feet							Total
		4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	20 in.	
Adams .....	From Salem St. southerly, replacing old 8 in. pipe renewed .....	.....	.....	.....	.....	.....	.....	.....	.....
Aiken.....	From Cheever St. to Hall St. replacing old 4 in. pipe .....	.....	408.5	.....	.....	.....	.....	1200.9	.....
Arthur.....	From Hutchinson St. to Sagamore St.....	.....	339.0	.....	.....	.....	.....	.....	.....
Bachelor P1.....	From Walker St. westerly.....	193.5	.....	.....	.....	.....	.....	.....	.....
Boisvert.....	From Carolyn St. northerly.....	190.3	.....	.....	.....	.....	.....	.....	.....
Bowers .....	From Salem St. westerly, replacing old 4 in. pipe...	.....	3.6	312.1	.....	.....	.....	.....	.....
Cabot.....	From Hall St. northerly .....	116.0	.....	.....	.....	.....	.....	.....	.....
Cabot. ....	From Market St. to Moody, replacing old 12 in. pipe .....	.....	.....	.....	.....	.....	.....	492.5	.....
Carolyn.....	From Ennell St. southerly. ....	.....	680.5	.....	.....	.....	.....	.....	.....
Carter Ave.....	From Gorham St. easterly.....	.....	254.5	.....	.....	.....	.....	.....	.....
Chauncey .....	From B St. northerly .....	.....	.....	638.0	.....	.....	.....	.....	.....
Cheney P1 .....	From Barclay St. easterly ..	190.0	.....	.....	.....	.....	.....	.....	.....
Church . ....	From Central St. to Lawrence St. replacing old 12 in. pipe .....	.....	.....	.....	.....	.....	998.9	.....	.....
Clinton Ave.....	From Mammoth Road, westerly.....	234.5	.....	.....	.....	.....	.....	.....	.....

# LOW SERVICE—WATER PIPE LAID DURING 1912—Continued

Street	LOCATION	Length of Pipe in Feet						TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	20 in.
Cross .....	At Board of Health Stable, Fire Service .....	.....	16.6	.....	.....	.....	.....	.....
Crowley .....	From end southerly .....	.....	41.0	.....	.....	.....	.....	.....
Dalton .....	From Lilley Ave. northerly .....	.....	227.3	.....	.....	.....	.....	.....
Dane Ave .....	From Dane St. to Pawtucket St. ....	318.5	.....	.....	.....	.....	.....	.....
Dutton .....	From Fletcher St. northerly, old 6 in. and 10 in. pipe removed .....	.....	.....	.....	.....	907.3	.....	.....
Fletcher .....	From Dutton St. northerly, old 12 in. pipe removed ..	.....	.....	.....	.....	6.0	.....	.....
Hale .....	From Chelmsford St. easterly, old 6 in. pipe removed ..	.....	.....	.....	267.5	.....	.....	.....
Hazel .....	From end northeasterly .....	.....	145.0	.....	.....	.....	.....	.....
Highland Ave....	From Parker St. northerly .....	.....	98.3	.....	.....	.....	.....	.....
Hutchinson .....	From Arthur St. northerly, old 4 in. pipe removed ....	.....	26.0	.....	.....	.....	.....	.....
June .....	From Thirteenth St. southerly, old 4 in. pipe removed ..	.....	495.0	.....	.....	.....	.....	.....
L .....	From Fulton St. easterly .....	197.0	.....	.....	.....	.....	.....	.....
Kyan .....	From end westerly .....	105.0	109.0	.....	.....	.....	.....	.....
Marion .....	From Broadway southerly .....	.....	80.8	.....	.....	.....	.....	.....

# LOW SERVICE—WATER PIPE LAID DURING 1912—Continued

Street	LOCATION	Length of pipe in feet.							*TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	20 in.	
Market .....	At J. C. Ayer Co. Fire Service .....	19.0	.....	.....	.....	.....	.....	.....	.....
Market .....	From Adams St. to Cabot St., old 8 in. pipe removed	.....	.....	.....	.....	.....	.....	52.5	.....
Merrill Ave .....	From end near Methuen St. southerly .....	.....	108.0	.....	.....	.....	.....	.....	.....
Merrimack .....	At Sun Building. Fire service .....	.....	50.9	.....	.....	.....	.....	.....	.....
Merrimack .....	At Chalifoux Building. Fire Service .....	43.5	.....	.....	.....	.....	.....	.....	.....
Merrimack .....	At Grosvenor Block. Fire Service .....	9.0	.....	.....	.....	.....	.....	.....	.....
Middlesex .....	Fire Service to Paterson Rubber Co. ....	.....	.....	20.0	.....	.....	.....	.....	.....
Pawtucket .....	From Merr'k St. to School St., old 8 in. pipe removed	.....	.....	.....	374.5	1221.2	.....	.....	.....
Payne .....	From School St. easterly, old 4 in. pipe removed, 214'	.....	.....	510.0	.....	.....	.....	.....	.....
Perry .....	At new Beam House, Am. H. & L. Co. Fire Service	.....	84.0	.....	.....	.....	.....	.....	.....
Perry .....	At Lowell Elec. Lt. Corp. new building. Fire service	.....	3.6	.....	.....	.....	.....	.....	.....
Plymouth .....	From end southerly .....	.....	68.0	.....	.....	.....	.....	.....	.....
Prescott .....	At Sun Building. Fire Service .....	.....	20.7	.....	.....	.....	.....	.....	.....
Prescott .....	At Sun Building. Fire Service .....	20.0	.....	.....	.....	.....	.....	.....	.....
Ruth .....	From Wedge St. northerly .....	.....	.....	156.0	.....	.....	.....	.....	.....

# LOW SERVICE—WATER PIPE LAID DURING 1912—Continued

Street	LOCATION	Length of pipe in feet							Total
		4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	20 in.	
Rutland .....	From end, northerly .....	.....	60.0	.....	.....	.....	.....	.....	.....
Saunders .....	From Payne St. southerly, old 4 in. pipe removed.....	.....	.....	35.0	.....	.....	.....	.....	.....
Sawtelle Pl.....	From School St., westerly, old 6 in pipe discontinued.....	.....	145.4	.....	.....	.....	.....	.....	.....
School .....	From Middlesex St. to Western Ave. old 6 in. pipe, 531 ft. removed .....	.....	.....	.....	.....	731.4	.....	.....	.....
St. James.....	From end westerly .....	.....	4.0	.....	.....	.....	.....	.....	.....
Stromquist Ave..	Fram Lundberg St., southerly.....	.....	.....	145.0	.....	.....	.....	.....	.....
Stromquist Ave..	From Weed St., northerly .....	.....	.....	41.0	.....	.....	.....	.....	.....
Staveley Ave.....	From end easterly .....	.....	3.5	.....	.....	.....	.....	.....	.....
Troy.....	From Stevens St. to Harvard St .....	.....	.....	488.0	.....	.....	.....	.....	.....
Viola .....	From Chelmsford St. westerly .....	.....	532.3	.....	.....	.....	.....	.....	.....
Webber.....	From Princeton St., northerly.....	.....	.....	281.0	.....	.....	.....	.....	.....
Weed .....	From Stromquist Ave., westerly .....	.....	80.0	.....	.....	.....	.....	.....	.....
West Tenth .....	From West Eleventh St., easterly.....	.....	118.0	.....	.....	.....	.....	.....	.....
Western Ave..	From School St., easterly, 24' old 10" pipe removed.....	.....	.....	.....	.....	195.1	.....	.....	.....
Wentworth Ave..	From Rogers St., northerly.....	.....	187.5	.....	.....	.....	.....	.....	.....
Wilder.....	From Parker St., southerly .....	.....	183.0	.....	.....	.....	.....	.....	.....

# HIGH SERVICE—WATER PIPE LAID IN 1912

Street	LOCATION	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Vernon .....	From Bennett St. northerly, old 4 in pipe removed, 278'	.....	278.0	.....	.....	.....	.....
Holyrood Ave .....	From end near Laurel St., northerly .....	.....	181.0	.....	.....	.....	.....

# LOW SERVICE—WATER PIPE REMOVED IN THE YEAR 1912

Street	LOCATION	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Alken.....	From Cheever St. to Hall St .....	408.5	.....	.....	.....	.....	.....
Bowers .....	From Salem St. westerly .....	315.7	.....	.....	.....	.....	.....
Cabot .....	From Market St. to Moody St .....	.....	.....	.....	.....	375.5	.....
Church .....	From Central St. to Lawrence St.....	.....	.....	.....	.....	998.9	.....
Dutton .....	From Fletcher St. northerly .....	.....	554.2	.....	353.1	.....	.....
Fletcher .....	From Dutton St. northerly .....	.....	.....	.....	.....	6.0	.....
Hale .....	From Chelmsford St. easterly .....	.....	267.5	.....	.....	.....	.....
Hutchinson .....	From Arthur St. northerly .....	26.0	.....	.....	.....	.....	.....
Market .....	From Adams St. to Cabot St. . . . .	.....	.....	52.5	.....	.....	.....
Pawtucket .....	From Merrimack St. to School St.....	.....	.....	1595.7	.....	.....	.....
Payne .....	From School St. easterly .....	214.0	.....	.....	.....	.....	.....
Saunders .....	From Payne St. southerly .....	35.0	.....	.....	.....	.....	.....
School .....	From Middlesex St. southerly .....	.....	531.0	.....	.....	.....	.....
Western Ave.....	From 3 way at ramp. westerly.....	.....	.....	.....	24.0	.....	.....

# LOW SERVICE—WATER PIPE REMOVED IN THE YEAR 1912—Continued

Street	LOCATION	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
June .....	From Thirteenth St. southerly.....	495.0	.....	.....	.....	.....	.....
Sawtelle Pl.....	From School St. westerly (discontinued) .....	... ..	145.4	.....	.....	.....	.....
Knapp Ave .....	From Rogers St. westerly .....	.....	.....	534.0	.....	.....	.....

# HIGH SERVICE—WATER PIPE REMOVED DURING THE YEAR 1912

Street	LOCATION	Length of pipe in feet					TOTAL
		4 in.	6 in.	8 in.	10 in.	12 in.	
Vernon .....	From Bennett St. northerly .....	278.0	.....	....	.....	.....	.....



# LOW SERVICE—LIST OF STOP GATES SET DURING THE YEAR 1912.

Streets	LOCATION	4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	18 in.	20 in.
Adams.....	7.5 ft. north of south line Salem St. 28 5 ft. west of west line Cabot St....								1
Adams.....	South line Cross St, 14 ft. west of west line Adams St.....								1
Aiken.....	South line Hall St., 13 ft. west of east line Aiken St.....	1							
Arthur.....	East line Sagamore St., 11 ft. south of north line Arthur St.....	1							
Arthur.....	West line Hutchinson St., 11 ft. south of north line Arthur St.....	1							
*Bachelder Pl.	14 ft. east of west line Walker St., 15 ft. north of south line Bachelder Pl.	1							
Boisvert.....	North line Carolyn St., 12 ft. east of West line Boisvert St.....	1							
Bowers .....	South line Salem St., 13.5 ft. west of east line Bowers St.....			1					
Cabot.....	2 ft. north of north line Merrimack St. 23 ft. east of west line Cabot St ...								1
*Carolyn.....	10.5 ft. north of south line Ennell St., 12 ft. east of west line Carolyn St....	1							
*Carter Ave...	16.5 ft. east of west line Gorham St., 7 ft. north of south line Carter Ave..	1							
Chauncey.....	North line B St. 12 ft. east of west line Chauncey St.....			1					
Cheney Pl....	East line Barclay St., 9 ft. south of north line Cheney Pl.....	1							
Church .....	42 ft. west of east line Central St, 13 ft. north of south line Church St .....						1		
Church . ....	7 ft. west of west line Lawrence St., 17 ft. north of south line Church St..						1		
*Clinton Ave..	32.5 ft. east of west line Mammoth Rd. 10 ft. south of north line Clinton Ave	1							

\*Indicates for grade crossing

LOW SERVICE—LIST OF STOP GATES SET DURING  
THE YEAR 1912. —Continued

Streets	LOCATION	4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	18 in.	20 in.
Cross .....	11 ft. east of west line Adams St. 27 ft. south of north line Cross St.....	1							
Cross .....	18.5 ft. east of west line Adams St., 27 ft. south of north line Cross St.....	1							
Dalton.....	West line Lilley Avenue, 12 ft. south of north line Dalton St.....	1							
*Dane Ave....	53.5 ft. north of south line Pawtucket St., 5 ft. east of west line Dane Ave.	1							
*Dane Ave....	North line Dane St., 7.5 ft. east of west line Dane Ave.....	1							
Dutton.....	237 ft. south of south line Broadway, 21 ft. east of east line Dutton St.....						1		
Dutton.....	13 ft. west of east line Fletcher St., 21 ft. west of east line Dutton St.....						1		
Dutton.....	1.5 ft. north of north line Kitson's, 34 ft. east of west line Dutton St..		1						
Dutton.....	233 ft. south of south line Broadway, 17 ft. west of east line Dutton St.....		1						
Fletcher.....	16 ft. west of east line Fletcher St., 26 ft. north of B & M. R. R. Track....						1		
Hale.....	9 ft west A. Lincoln Park, 1 ft. north of north line Hale St.....				1				
*Highland Ave	11.8 ft. south of north line Parker St., 10 ft. east of west line Highland Ave. ...	1							
June.....	On south line of Thirteenth St., 13 ft. west of east line June St. ....	1							
L.....	East line Fulton St , 6 ft. south of north line L St.....	1							
*Marion.....	22 ft. north of south line Broadway, 18 ft. east of west line Broadway.....	1							
*Market.....	17 ft. south of north line Market St , 54 ft. east of west line J. C. Aver Bld'g.	1							

\*Indicates for grade crossing

LOW SERVICE—LIST OF STOP GATES SET DURING  
THE YEAR 1912.—Continued

Streets	LOCATION	4 in.	6 in.	8 in	10 in	12 in	16 in.	18 in.	20 in.
Merrimack....	26 ft. east of west line Cabot St., 25 ft. south of north line Merrimack St.....					1			
Middlesex.....	2 ft. east of east line School St., 15.3 ft. south of north line Middlesex St....			1					
Moody .....	21.5 ft. west of east line Cabot St., 16 ft. north of south line Moody St.....		1						
Moody .....	29 ft. west of east line Cabot St., 16 ft. north of south line Moody St.....		1						
Middlesex.....	50 ft. east of east line Grosvenor St., 2 ft. south of north line Middlesex St....			1					
Pawtucket....	West line Merrimack St., 15 5 ft. north of south line Pawtucket St.....					1			
Pawtucket....	26.5 ft. west of east line Fletcher St., 19 ft. north of south line Pawtucket.					1			
Pawtucket....	West line Mt. Vernon St., 15 ft. north of south line Pawtucket St.....					1			
Pawtucket....	East line School St., 14.5 ft. north of south line Pawtucket St.....				1				
Payne .....	East line School St., 13 ft north of south line Payne St.....			1					
*Perry.....	342.3 ft. south of 1st angle in Perry St., 9.2 ft. east of west line Perry St....		1						
Ruth.....	North line Wedge St., 12 ft. east of west line Ruth St..			1					
Riverside .....	8 ft. south of north line Sparks St., 25.5 ft. east of west line Riverside St.			1					
Sawtelle Pl...	West line School St., 15 ft. north of south line Sawtelle St.....		1						
School .....	North line New St., 13 ft. east of west line School St.....					1			
School .....	North line Middlesex St., 13 ft. east of west line School St.....					1			

\*Indicates for grade crossing.

# LOW SERVICE—LIST OF STOP GATES SET DURING THE YEAR 1912.—Continued

Streets	LOCATION	4 in.	6 in.	8 in.	10 in.	12 in.	16 in.	18 in.	20 in.
Stromquist Ave	South line Lundberg St., 12 ft. west of east line Stromquist Avenue.....			1					
Troy.....	2 ft. west of west line Stevens St., 12.5 ft. south of north line Troy St.....			1					
Troy....	3 ft east of east line Harvard St., 12 ft. south of north line Troy St.....			1					
Vernon.....	North line Bennett St., 18.5 ft. west of east line Vernon St .....		1						
*Viola .....	16.3 ft. east of west line Chelmstord St. 10 ft. south of north line Viola St.....		1						
*Webber .....	11.5 ft. south of south line Princeton St. 12 ft. east of west line Webber St.....			1					
Weed .....	2 ft. east of west line Stromquist Ave., 10 ft. south of north line Weed St.....		1						
Western Ave..	39 ft. east of east line School St., 13 ft. north of south line Western Ave.....					1			
*Wentworth Avenue.	15 ft. south of north line Rogers St., 10 ft. east of west line Wentworth Ave. ....		1						
*Wilder.....	26 5 ft. south of south line Parker St., 12 ft. east of west line Wilder St.....			1					
Adams.....	56 ft. south of south line Salem St., 21 ft. west of east line Adams St.....		1						
Adams.....	309 ft. south of south line Salem St., 9.5 ft. west of east line Adams St.....		1						
Adams.....	563 ft south of south line Salem St., 9.5 ft. west of east line Adams St.....		1						
Adams.....	289.5 ft. north of north line Cross St. 9.5 ft. west of east line Adams St.....		1						
Adams.....	6 ft. north of north line Cross St., 9.5 ft. west of east line Adams St.....		1						
Cabot.....	4 ft. north of north line Merrimack St., 18 ft. east of east line Cabot St.....		1						

\*Indicates for grade crossing.

# LOW SERVICE—LIST OF STOP GATES SET DURING THE YEAR 1912. — Continued

Streets	LOCATION	4 in.	6 in.
Church .....	7.5 ft. east of east line Central St., 11.7 ft. north of south line Church St.....	1	1
Church .....	212.9 ft. east of east line Central St., 10 ft. north of south line Church St.....	1	1
Church .....	556.9 ft. east of east line Central St., 10.3 ft. north of south line Church St. ....	1	1
*Merrimack ....	4.8 ft. east of west line Sun Building, 49.2 ft. north of south line Merrimack St.....	1	1
*Merrimack ....	24 ft. east of west line Chalifoux Building, 42 ft. north of south line Merrimack St.....	1	...
*Merrimack ....	20 ft. west of west line Bridge St, 23.4 ft. south of north line Merrimack St.....	1	...
Prescott .....	51 ft. south of south line Merrimack St., 12 ft. east of west line Prescott St.....	1	1
*Prescott .....	51 ft. south of south line Merrimack St., 21 ft. east of west line Prescott St.....	1	1
Prescott .....	54 ft. south of south line Merrimack St., 12 ft. east of west line Prescott St.....	1	...
*Prescott .....	54 ft. south of south line Merrimack St., 21.3 ft. east of west line Prescott St.....	1	...
Sawtelle Place.	West of line School Street, 15 ft. north of south line Sawtelle Place.....	1	1
Western Avenue Ramp .....	190 ft. east of east line School St., 22 ft. south of north line Western Avenue.....	1	1

\*Indicates for grade crossing



# LOW SERVICE—LIST OF HYDRANTS SET DURING THE YEAR 1912.

STREET	LOCATION
Adams . . . . .	Location changed from 302.5 ft. north of north line Cross St. east side to 13 ft. south of same on west side.
Adams . . . . .	West side 497 ft. south of south line Salem St.
Adams . . . . .	Location changed from 313 ft. south of south line Salem St., west side to 4 ft. north of same.
Carolyn . . . . .	West side 448.5 ft. south of south line Ennell St.
Chauncey . . . . .	West side 626 ft. north of B St.
Church . . . . .	South side 7.5 ft. east of east line Central St. changed from flush to post with new gate.
Church . . . . .	Location changed from 206.9 ft. east of Central St. to 6 ft. east of same, south side with new gate.
Church . . . . .	South side 556.9 ft. east of Central St., changed from flush to post with new gate.
Dutton . . . . .	Location changed from 2.5 ft. south of north line Kitson St. to 1.5 ft. north of same line Kitson St. west side, new gate.
Dutton . . . . .	233 ft. south of south line Broadway changed to 8 in. pipe connection with new gate, east side.
Gorham . . . . .	Location changed from near north line Locke St. to 3 ft. north of same line, flush to post, west side
Holyrood Ave. . . . .	East side 338 ft. north of north line Laurel St.
Nesmith . . . . .	On O. H. Perry's property, 64 ft. east of Nesmith St. 22 ft. south of house No. 282.
Pawtucket . . . . .	Location changed from west line Arlington St. to 13.5 ft. west of same, south side.
Plymouth . . . . .	North side 23 ft. west of west line Colonial Ave.
School . . . . .	East side 68 ft. north of north line Payne St., opposite Sawtelle Place.
St. James . . . . .	South side 162 ft. west of west line Agawam St.

LOW SERVICE—LIST OF HYDRANTS SET DURING  
THE YEAR 1912—Continued.

STREET	LOCATION
Troy . . . . .	North side 2.5 ft. east of east line Putnam Ave.
Viola . . . . .	North side 514.5 ft. west of west line Chelmsford St.
Webber . . . . .	West side 268 ft. north of north line Princeton St.
Weed . . . . .	North side on west line Stromquist Ave.
Western Ave. . . . .	South side 41 ft. east of east line School St.
Carolyn . . . . .	West side 30 ft. north of north line Ferry Lane
Staveley . . . . .	Location changed 24 ft. west of angle in street to 213.5 ft. east of angle.



LOW SERVICE—LIST OF HYDRANTS REMOVED  
DURING 1912.

STREET	LOCATION
Central....	West side at north line Appleton St. "Lowrey"
Lowell Bleach- ery Yard.....	At Bleachery Stable
Dutton .....	219 ft. south of south line Broadway, "Lowrey"
Fletcher .....	At Dutton St., "Lowrey"
Sixth Ave .....	145 ft. south of south line Dunfey St. "Ludlow" on east side

# LOW SERVICE—LIST OF STOP GATES REMOVED DURING THE YEAR 1912.

Street	LOCATION	4 in.	6 in.	8 in.	10 in.	12 in.
Bowers . . . . .	8.5 ft. south of south line Salem St., 13½ ft. west of east line Bowers St.	1	...	...	...	...
Church . . . . .	38.5 ft. west of east line Central St. 4.5 ft. north of south line Church St. . . . .	...	...	...	...	1
Dutton . . . . .	East line Fletcher St. 39 ft. south of north line Dutton St . . . . .	...	...	...	1	...
Hale . . . . .	35½ ft. west of west line Lincoln St. 32.5 ft. north of south line Hale St. . . . .	...	1	...	...	...
Pawtucket . . . . .	16½ ft. west of east line Merrimack St. 18 ft. north of south line Pawtucket St . . . . .	...	...	1	...	...
Pawtucket . . . . .	25 ft. west of east line Fletcher St. 17 ft. north of south line Pawtucket St . . . . .	...	...	1	...	...
Pawtucket . . . . .	16 ft. east of east line School St., 17½ ft. north of south line Pawtucket St. . . . .	...	...	1	...	...
Payne . . . . .	4 ft. east of east line School St., 12 ft. north of south line Payne St. . . . .	1	...	...	...	...
School . . . . .	1 ft. north of north line Middlesex St. 33 ft. east of west line School St . . . . .	...	1	...	...	...
Aiken . . . . .	50 ft. north of north line Cheever St. 14 ft. west of east line Aiken St. . . . .	1	...	...	...	...
Aiken . . . . .	South line Hall St. 16 ft. west of east line Aiken St. . . . .	1	...	...	...	...
Western Ave. Ramp . . . . .	8 ft. north of east wall of ramp, 14.5 ft. north of south line Western Ave. . . . .	...	1	...	...	...

## SUMMARY.

Low Service water pipe laid in 1912..	15,284 ft.
Low Service water pipe laid previous to 1912.....	735,445 ft
	<hr/> 750,729 ft.
Low Service water pipe removed in 1912. (Deduct.).....	6,932 ft
	<hr/>
Total Low Service water pipe in use January 1. 1913.	743,797
High Service water pipe laid in 1912..	459 ft.
High Service water pipe laid previous to 1912.....	49,974 ft.
	<hr/> 50,433 ft.
High Service water pipe removed in 1912. (Deduct.) ....	278 ft.
	<hr/>
Total High Service in use Jan 1, 1913.....	50,155 ft.
Total High and Low Service to Jan. 1, 1913....	793,952 ft.
Total pipe in use Jan. 1, 1913, in miles, .....	150 37


SCHEDULE OF DISTRIBUTION MAINS IN SERVICE  
JANUARY 1, 1913.

LOW SERVICE		HIGH SERVICE
4 in. ....	35,449.	1,507.
6 in. ....	440,408.	30,446.5
8 in. ....	144,680.5	6,209.5
10 in. ....	28,190.5	4,119.
12 in. ....	66,026.	7,873.
16 in. ....	12,910.	
20 in. ....	7,578.	
24 in. ....	3,992.	
30 in. ....	4,563.	
<hr/> Tot'l Low Serv'e 743,797		<hr/> Total High Service 50,155



ANNUAL REPORT  
OF THE  
*Births, Marriages and Deaths*  
OF THE  
CITY OF LOWELL  
For the Year 1912



LOWELL, MASS.  
F. A. M. Tobin's  Printery

1913

CITY OF LOWELL

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IN MUNICIPAL COUNCIL,  
April 22, 1913.

Received and ordered on file.

STEPHEN FLYNN,  
City Clerk.

# CITY OF LOWELL

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CITY CLERK'S OFFICE,

April 22, 1913.

TO THE HONORABLE MUNICIPAL COUNCIL.

GENTLEMEN :

I have the honor to present to you the annual report of Births, Marriages and Deaths for the year 1912, as of record in this office, to wit :

## BIRTHS

By Wards.....	1	2	3	4	5	6	7	8	9	Total
Whole Number .....	207	413	249	260	274	676	243	183	213	2718
Males.....	117	212	123	129	150	344	121	95	110	1401
Females .....	90	201	126	131	124	332	122	88	103	1317
American Parents ....	77	46	84	59	56	90	68	87	76	643
Foreign Parents.....	84	314	91	160	187	427	112	43	77	1495
American Father, Foreign Mother ....	27	28	39	20	18	69	33	22	32	288
Foreign Father, American Mother.....	19	25	35	21	13	90	30	31	28	292
Twins.....	4	3	2	3	2	4		2	5	25
Triplets .....		1								1

In addition to the above there are recorded the births of twenty-eight children born in Lowell of parents resident elsewhere, and eight born elsewhere of Lowell parents.

Still births not included, 105.



## MARRIAGES

Eleven hundred and nine notices of intention of marriage were received and entered in 1912, and ten hundred and eighty-three marriages recorded, nine hundred and eighty-nine being solemnized in Lowell and ninety-four elsewhere.

## MARRIAGES BY MONTHS

January .....	74	May .....	72	September .....	91
February .....	79	June .....	143	October .....	129
March .....	20	July .....	74	November .....	126
April .....	100	August .....	95	December .....	80

## NATIONALITY OF PARTIES

	Grooms	Brides
United States .....	536	526
Canada .....	145	130
Russia and Austria .....	124	119
Greece .....	70	67
Ireland .....	58	67
England .....	43	54
Portugal and Western Islands .....	37	38
British Provinces .....	27	34
Norway and Sweden .....	14	13
Scotland .....	9	13
Other Countries .....	23	19

Oldest couple married—Groom 67; Bride 62.

Youngest couple married—Groom 17; Bride 17.

Oldest person married 68.

Youngest person married 16.

Grooms under 21 years 69; Brides under 18 years 18.

## DEATHS

The total number of deaths returned and recorded in the City Clerk's office for the year 1912, exclusive of still births, was 1952, of which number 61 were residents of Lowell who died elsewhere, making the number of deaths as having occurred in Lowell (38 of which were non-residents) 1891.

Males .....	982
Females .....	909
Still Births.....	105

Statistics in greater detail may be found in the annual report of the Board of Health.

Respectfully submitted,

STEPHEN FLYNN,

City Clerk.

TABLE GIVING THE NUMBER OF BIRTHS, MARRIAGES AND DEATHS IN LOWELL SINCE ITS INCORPORATION

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YEAR	POPULATION	BIRTHS	MARRIAGES	DEATHS
1826-1843		Est. 5010	Est. 4500	Est. 4186
1844	25,163	662	319	362
1845		660	399	363
1846	29,127	772	591	690
1847		719	659	949
1848		796	516	825
1849		672	320	903
1850	33,383	966	674	492
1851		1018	669	629
1852		1007	669	604
1853		1093	742	734
1854		1092	808	834
1855	37,554	1039	687	766
1856		1034	632	790
1857		1051	585	818
1858		827	467	626
1859		983	496	739
1860	36,827	1077	497	720
1861		949	459	713
1862		763	368	641
1863		657	302	695
1864		658	335	633
1865	30,990	672	406	575
1866	36,878	813	625	749
1867		826	596	640
1868		860	495	857
1869		858	575	763
1870	40,928	926	515	952
1871		886	647	1033
1872		1099	670	1048
1873		1365	705	1161
1874		1356	580	1184
1875	49,688	1296	513	1020
1876		1264	514	1147
1877		1341	552	1029
1878		1332	546	1088
1879		1412	635	1006
1880	59,485	1770	744	1312
1881		1840	786	1287

YEAR	POPULATION	BIRTHS	MARRIAGES	DEATHS
1882	-	1755	813	1322
1883		1681	848	1432
1884		1786	735	1401
1885	64,107	1769	707	1328
1886		1813	813	1499
1887		1835	873	1872
1888		1886	886	1763
1889		2133	965	1894
1890	77,696	2175	979	1960
1891		2203	944	1976
1892		2714	941	2228
1893		2688	955	2108
1894		2764	793	1790
1895	84,359	2772	978	1898
1896		2805	854	1896
1897		2622	866	1882
1898		2422	962	1835
1899		2419	1015	1880
1900	94,969	2574	1135	1852
1901		2770	1022	2042
1902		2496	1075	1944
1903		2514	1026	1897
1904		2515	1065	1736
1905	94,889	2513	981	1899
1906		2550	1125	1919
1907		2689	1055	2063
1908		2730	860	1963
1909		2631	1022	1885
1910	106,294	2609	1065	2100
1911		2552	1035	1999
1912		2718	1083	1891
		<hr/> 117,524	<hr/> 55,274	<hr/> 92,717



THIRTY-FIFTH  
ANNUAL REPORT  
OF THE  
BOARD OF HEALTH  
OF THE  
CITY OF LOWELL  
For the Year 1912



UNION PRINTING COMPANY  
LOWELL, MASS.





# ORGANIZATION, 1912

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## BOARD OF HEALTH

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PIERRE BRUNELLE, M. D., CHAIRMAN

JOHN A. OSGOOD

DENNIS J. MURPHY, Esq., to Feb. 6th, 1912

THOMAS F. CARROLL, M. D., from Feb. 6th, 1912

FRANCIS J. O'HARE, SECRETARY

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### HEALTH DEPARTMENT OFFICERS

#### OFFICE EMPLOYEES

FREDERICK A. BATES, Agent

THOMAS B. SMITH, M. D., Bacteriologist

WILLIAM A. JOHNSON, M. D., Physician

KATHARINE W. SNOW, Registrar

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#### INSPECTORS

FRANCIS J. O'HARE, Inspector of Contagious Diseases

STEPHEN GARRITY, Plumbing Inspector

WILLIAM H. CONNORS, Tenement House Inspector

JOHN KEARNEY, Health Inspector

CLEMENT A. HAMBLET, V. S. Inspector Meat and Provisions

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#### MILK DEPARTMENT

MELVIN F. MASTER, Milk Inspector

JAMES E. HILL, Collector

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#### PRIVATE SCHOOL PHYSICIANS

DR. HOWARD W. JEWETT

DR. FREDERICK P. MURPHY

DR. RODRIGUE MIGNAULT

DR. RALPH C. STEWART



# REPORT

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LOWELL, MASS., January, 1913.

*To the Honorable Mayor and Members of the Municipal  
Council of the City of Lowell.*

Gentlemen:

The Board of Health respectfully presents its thirty-fifth annual report.

On February 6, 1912, the Board, consisting of Mr. John A. Osgood, Dr. Pierre Brunelle and Dr. Thomas F. Carroll, who was elected to succeed Dennis J. Murphy, Esq., effected organization by choosing Dr. Pierre Brunelle, Chairman.

With the new form of Municipal Government, the Health Department, with the other departments and all boards and offices connected therewith, to wit: Police, Health, Poor, Legal and Claims, came under the administrative head of His Honor the Mayor, Commissioner of Public Safety.

It is a pleasure to state that though changes came with the new charter, we, at all times, by mutual consideration and good sense co-operated in harmony for the best interests of the Municipality.

It is well to note the death rate this year, 17.79, is the lowest excepting 1904, in which year, however, the figures, 16.62, were obtained from an over-estimated population. A revision of the figures to agree with the facts would show the mortality rate of 1912 to be the lowest in the past twenty-three years.

Also, by far the lowest on record is the number of deaths from Cholera Infantum in this year of 1912.

An emergency having arisen through a contagious disease, on Dec. 23, 1912, the comfortable cottage on the City grounds, Chelmsford Street, with recommendation, was taken by His Honor, the Mayor, for the purposes of a Temporary Contagious Hospital. Its doors were opened and remained so under the Rules and Regulations of the Board of Health. Shortly afterwards, the members of the Board, in body, with the Agent, paid an official visit there, a report of which follows:—

“Upon our arrival at the institution, we were ushered into a room free from contagion. Therefrom, after donning caps and gowns, as a prophylactic measure, we carefully inspected the premises. That which arrested our attention was the thorough cleanliness and proper order of things. The high character of the work, also the despatch in which the hospital was so carefully equipped were then recorded.

Space is utilized to the best advantage. Five medium-sized rooms, capacity of ten beds, are reserved for women and children. To this compartment is assigned a lavatory wholly sanitary.

Practically the whole lower floor of the cottage, capacity of nine beds, has been converted into a male ward. These rooms are hygienic and pleasantly furnished. On account of the position of the building, they admit an abundant supply of light and sunshine, also they command a view which is wide in scope.

The heating by steam and the lighting by gas, maintained through the courtesy of a neighboring institution, is very good.

The three children, four female and male adult patients gave evidence of having received the best of care and treatment. While a few, in the early stages of their illness, were very sick, the remainder were convalescing very happily. No effort was spared to make their stay as pleasant as possible.

The culinary department is under the supervision of a woman especially well adapted for the position.

To the Hospital Corps, consisting of a visiting physician, a trained nurse acting as matron, and a pupil nurse, much credit is due, not only for the splendid management, but also for the good results obtained.

In co-operation with each other, the maximum efficiency is being attained."

The number of contagious diseases and the mortality thereof shows a favorable record, compared to others of recent years. That which gave us most concern was the so-called Scarlet Fever Epidemic, regarding which we cheerfully submit the Chairman's report:

### **SCARLET FEVER OF 1912 IN THE CITY OF LOWELL.**

In justice to all concerned, the epidemic will be considered from three view-points:

First. From the view-point of medicine, as to the possibilities of contagion and infection of Scarlet Fever; also including the milk question.

Second. From the view-point of diagnosis in medicine of Scarlet Fever.

Third. The unfairness of political interests in this epidemic of 1912.

#### **Scarlet Fever.**

I. In brief, Scarlet Fever is an infectious disease, characterized by a diffuse exanthem (rash) and an angina (sore throat) of variable intensity. In some years, the disease runs mild; in other years, it is fearfully malignant.

Incubation (hatching stage, number of days after being infected before the disease manifests itself), from one to seven days, oftenest two to four.

It is a wide-spread infection, occurring in nearly all parts of the globe. Sporadic cases (cases now and then, here and there) occur from time to time, and then under unknown conditions become epidemic.

Epidemics. Epidemics are more intense in the autumn and winter. The frequency diminishes during the summer

months and gradually increases through October, November and December. Epidemics of the mild type are always more extensive than the severe type, on account of so many "missed" cases (cases which never come under medical observation), the lack of care and isolation which naturally goes with such cases. In this way, the infected person, who is a source of infection to others, and these to others again, becomes very dangerous through congested channels of a large community. It is by these mild cases which are "missed," that the disease is sown broadcast.

In the severe type, on the other hand, the person is very sick; the family doctor is called, the case is reported to the Board of Health. The patient realizes that he or she is sick, must be careful, and so do his or her immediate friends and relatives; hence, a respectful following of the doctor's advice, also a safeguard of the rules and regulations concerning such a sickness.

Scarlet Fever is spread by direct and indirect contact, more frequently than any other disease. Unlike typhoid fever and diphtheria, there is no specific germ that we know of, and it is not known accurately where in the body the poison is found, how it is given off, or in what form it is taken by another person. The chief source of the infection is the patient himself, and the area of contagion about him is limited to a few feet. It can be imagined what a source of infection such a case, in a crowded thoroughfare, may accomplish. In fact, the scarlatinous virus surpasses any other eruptive disease, except perhaps small-pox, in its tenacity and portability. Even after the most complete disinfection, children who have returned home may catch the disease. No process of disinfection practical can kill all the germs or virus in an infected room or house, and any process which will destroy 75 per cent., or 85 per cent., or at most 90 per cent. of the germs, if we may call it so, one must be content with.

The germs may live for years. Consequently, it can readily be seen, in a city where scarlet fever is with us all the



time, either in sporadic or epidemic form, there remains always a large number of foci of infection, which, under proper climatic conditions, may flare up at different points of a community and spread quickly into an epidemic.

It is also well known that such a disease may run higher in certain quarters of a city than in others; therefore, whosoever is unfortunate enough to deliver milk along these infected quarters, immediately comes under the ban of suspicion, and investigations follow. Coincidences of such may lead to unjust and unwarranted conclusions.

So, with the disease coming down to us in 1912 from 1910 and 1911 in epidemic form, in the midst of a fall season and winter season of the pleasantest and most agreeable weather for contact and association, with plenty of available material in the in-immune, the epidemic of Scarlet Fever this year—assuming at this stage of writing that it was all Scarlet Fever—started in a very mild form, such as not known before in the history of Lowell, and remained so to the last, notwithstanding.

Looking back as far as the Board of Health records show, the number of cases for each year is noted, to demonstrate that the disease at all times is with us in some form. Stamping out the disease is certainly a problem not for this generation. It has been with the human race for centuries and centuries.

Year.	Cases Reported.
1888 .....	89
1889 .....	155
1890 .....	230
1891 .....	237
1892 .....	240
1893 .....	208
1894 .....	304
1895 .....	160
1896 .....	76
1897 .....	90
1898 .....	309
1899 .....	173



1900 .....	80
1901 .....	65
1902 .....	116
1903 .....	146
1904 .....	120
1905 .....	48
1906 .....	370
1907 .....	521
1908 .....	82
1909 .....	100
1910 .....	304
1911 .....	226

In this epidemic, unfortunately for a certain milk dealer, who at all times showed himself ever ready to help and assist the Health Authorities, and whose milk plant is simply excellent, surely second to none in the State, his milk route runs through a hot-bed already seeded down with Scarlet Fever. Starting along the heavy part of his daily deliveries in the latter part of August, there were discovered by after-attending physicians cases of pronounced Scarlet Fever on Bellevue and Hastings Streets, the real centre of the stronghold of Scarlet Fever. These persons had been associating around, not knowing they had the disease. Similar cases of "walking" Scarlet Fever were reported, living on Grace, Andover, Bartlett, Willow, Fremont, Central, Ennell and Dracut Streets. No doubt, through these people the disease was sown everywhere. From the first of August and the early part of September, crop out a few cases every day all over the city, mostly in the outskirts, but strikingly so in the Highlands and Belvidere. Around these cases, as time proceeds, other cases begin to group themselves in clusters. In a stretch of 2250 linear feet, in a continuous line, including both sides of a street into another street, in a close neighborhood, appear as many as twelve or fourteen cases. Other clusters run in numbers ten, nine, eight, seven, six and four.

By far, the heavy part of the epidemic is included within a well-defined district. On a line starting from the Middlesex Street Depot westerly to Maker Street, then southerly on a line to Wedge Street, then easterly on a line to Chelmsford Street, and on a line along Chelmsford Street northeasterly to the point of starting. Notably the congested parts of such as the block-tenement districts within this quarter where the milkman delivers milk are practically free.

This milkman's route has been estimated to supply one-eighth of the population of the City. His supply is about ten times as large as the average milkman.

All these clusters over the City which group around the first case as a nucleus show a well-defined period of incubation in between the many to the one.

Of all the number of instances in the same family wherein a second case was reported, excepting three cases, the second case to the first shows a well-defined period of incubation. Such second cases number about forty-one clear examples.

The above citations indicate pretty clearly that the one first case must have carried the disease to others, and suggest closely affiliated groups of playmates or persons who would associate together, and again with others who were next infected. These again through the same ways of human nature infected more, and so the infection spread.

The Flats, the French-American population in Little Canada, Pawtucketville and Centralville, though he supplies heavily in these localities, show practically a clean slate. The congested districts, around the stores and boarding houses which he supplies, also practically show a clean slate.

The disease runs mostly through the outskirts, principally in the Highlands, Belvidere, and next Centralville Heights, or, in other words, through the so-called better class where contact and association might figure. All the other classes that drank the same milk remain healthy and free from disease. In contention, it may be said that the people who hardly show any Scarlet Fever, in comparison with those who do, might be

immune, by reason of previous disease. The birth rate in these parts, as compared with that in the other parts of the city where infection prevails, should answer this question to the satisfaction of any impartial mind.

In milk-bourne epidemics of Scarlet Fever, the milk is always contaminated from human sources. It must come in contact with persons infected with Scarlet Fever. Such epidemics come with an explosive onset, the germs reaching almost everybody at about the same time. From the very first, the raisers were scrupulously examined by Dr. Simpson, State Inspector and Dr. Carroll of the local Board of Health who was assigned to assist in the work of such investigation. As is well known, no time and effort was spared in scrutinizing these farms. The men employed at the milk dealer's plant were regularly examined; so were their families to see whether there might possibly be among them a "missed" case. All these searches did not connect the milk with Scarlet Fever infection.

On Oct. 4th, however, the Zaleski girl in Carlisle was found with peeling between two fingers. From this farm used to come daily eight cans of milk which went with all the other cans into the general supply, thoroughly mixed to be bottled and delivered throughout the city. The Zaleski farm milk was shut off at once until no danger could come from this source. That infection did not come from the Zaleski farm is generally admitted, though it was very proper to eliminate any possible danger, and shows that no chances were being taken. Had this girl Scarlet Fever, she would have been a source of infection for weeks prior to her being discovered.

Pasteurization started on Oct. 6th. Before Oct. 6th, the milk dealer in question did not have a case reported for six days. In fact his September cases all through, up to Oct. 6th are by far less for a corresponding period after this date, which should be the reverse if pasteurization is any just criterion. At no time was there that explosive onset of the sickness such as one would see from a supply which goes daily

to approximately 1-8 of the population. It is not exaggerating to say, with a whole supply such as his infected, twenty, thirty or forty cases a day, if not more would appear amongst his customers from the very first. In fact, his number of daily cases when divided by 10 compares very favorably with that of the other milkmen's daily cases. But as the infection was well sown by contact and association along this unfortunate milkman's path, so naturally much of the harvesting came along this path.

On Dec. 11th, one of the milk dealer's drivers who had been away from home for three or four days was telephoned to by his wife who stated that their child was indisposed. The family physician was immediately called and he believed his little patient might be coming down with Scarlet Fever. The driver was then and there eliminated from the milk-plant. The apprehension of the doctor was confirmed the next day, and as soon as the case was reported, the driver remained under strict quarantine from the first.

These two are the only persons who were found, and the possibilities of infecting the general milk supply are without reasonable foundation, considering the prompt handling of their cases, also the happening of Scarlet Fever before and after.

After a number of examinations of cows in the dairies had been carried on by Dr. Hamblet, Veterinarian, he in company with Dr. Carroll on Dec. 10th came across a cow with a diseased udder and pus oozing from one teat. The animal was removed from the premises with despatch and done away with immediately. It had been bought four days previous. Also about Dec. 6th and 7th following a series of milk cultures by Milk Inspector Melvin F. Master and bacteriological tests of these by Dr. Smith, Bacteriologist, pathogenic streptococci were found. It might be explained that all streptococci are not considered harmful in milk. There are some that are absolutely harmless according to late investigators. It is admitted that this cow may have been responsible for some sick-



ness—but never Scarlet Fever. The worst in this line which might come from a diseased udder is a septic sore-throat. The handling here of the situation was prompt and efficient, considering the amount of tedious work which ensues such inspection.

### THE MILK BOTTLE.

So accustomed have we become to the present milk package that we are inclined to forget it is a comparatively recent innovation. When the glass bottle came into use, we were taught to believe all our troubles were at an end, for we had a nice, clean-looking transparent container that seemed the acme of sanitary excellence. It has since been learned, however, that the glass bottle might be a source of real danger, as well as a great deal of annoyance, so that now a serious effort is being made to find a single service milk package, one that can be used once and thrown away. But this package as yet does not comply with the requirements of the case. The most serious indictment against the glass bottle is that it is apt to become infected in many way and thus spread disease. Furthermore the bottles are difficult to clean. They are very fragile and in addition to the loss from breakage, the failure to return many bottles adds considerably to the expense. The collection of the empty bottles is a constant source of irritation and trouble, also a considerable item on the wrong side of the ledger. The liability of the milk bottle to convey infection is its most serious disadvantage. The bottle may become infected in a household in a great variety of ways. To cite instances:—a person with diphtheria or scarlet fever may drink from the bottle or it may be wiped with a cloth that has been infected from a case of typhoid or it may be rinsed with infected water. Milk bottles are sometimes used to hold urine, tuberculosis sputum and other discharges from the body; some of them give evidence of having held whiskey, wood-alcohol, gasoline, paint, turpentine, carbolic acid, etc.; some of them are very dirty. If such a bottle is again filled with milk without proper disinfection, grave consequences

may ensue. No body of three men with their official retinue are omnipotent enough to insure proper and positive disinfection. In all these "missed" cases of contagious diseases the milk bottle is a very likely source of infection. But when and how to locate it? It is a system which has been pushed onto the milk business with a good deal of trumpeting. It may cause disease with everything in proper shape at both the raiser's plant and the milkman's plant. At least with the much abused can and measure system, each householder was responsible for the vessel which received the milk, and his or her idea of cleanliness was limited there. But now the thrifty, clean person returns a clean bottle for another. God knows where it has been, and what it contained before being filled with milk.

Truly the can and measure system well regulated is better and preferable in many ways to this bottle system which was heralded as a panacea for all ills of the milk business. This neat-looking package often full of disease germs has been brought upon us in a false light and this system as it is, and was from the beginning, is certainly doomed to go. At least with the old measure and can system, each milkman had his cans and measures in his possession all the time and they could easily be kept clean. The householder also was responsible for his own vessel which received the milk and his idea of cleanliness was his own.

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## DIAGNOSIS.

### II.

(A) Scarlet Fever.

(B) Acute Tonsillitis.

This epidemic has been running along the dividing line of mild Scarlet Fever and acute Tonsillitis (common sore-throat).

Acute Tonsillitis:—A disease so common and widespread that it attacks many persons in families where one member may have had the attack. It occurs mostly in October, November, December and the spring months of the year. It

spreads through families in such a way that it must be regarded as contagious, though not listed as a disease dangerous to public health and so not necessary to report to the Board of Health. The disease is met with most frequently in adolescence (from 10 years up to manhood) but is less frequent under 10 years, and is rare in infants. It generally begins, like Scarlet Fever, with a sore throat, pain in swallowing and general soreness. One or the two tonsils may be inflamed and swollen not unlike in Scarlet Fever. The glands of the neck may be swollen and tender as in Scarlet Fever. A diffuse erythema (rash) may simulate the rash of Scarlet Fever. The disease sometimes extends to the middle ear. Prostration may be extreme, such as it may be in Scarlet Fever or again may be absent. Prognosis or outcome is favorable. The disease as a rule does not last long.

---

Scarlet Fever  
is very contagious

Acute Tonsillitis  
is also contagious.

- |  |  |
|--|--|
| (1) Age.<br>Mostly from 1 yr. to 5 yrs.          | (1) Age.<br>Mostly from 10 yrs. to manhood.      |
| (2) Exanthem (Rash)<br>may be absent.            | (2) Erythema (Rash)<br>may be present.           |
| (3) Sore-throat.                                 | (3) Sore-throat.                                 |
| (4) Glands of neck<br>often swollen and tender.  | (4) Glands of neck<br>often swollen and tender.  |
| (5) Often spreads to<br>middle ear.              | (5) May attack middle ear.                       |
| (6) Prognosis varies in<br>severity.             | (6) Prognosis favorable.                         |
| (7) No specific germ.                            | (7) No specific germ.                            |
| (8) Commonest organism<br>present streptococcus. | (8) Commonest organism<br>present streptococcus. |
| (9) Commonly peels.                              | (9) Erythema (may peel finley)                   |



- |   |   |
|---|---|
| (10) Prevalence in seasons of the year—the same as tonsillitis. | (10) Prevalence in seasons of the year—same as Scarlet Fever. |
| (11) Strawberry tongue generally present in the earlier stage.  |   |

That we have been dealing with an atypical epidemic of Scarlet Fever, nobody will question. In very many of the cases reported, it was said that there was no rash. When present, it was only partially so and then very transitory. The strawberry tongue in many cases reported was said to be absent. Amongst a large number again, through after-results of throat cultures taken, there were proven to be positive cases of Diphtheria.

Along such diseases resembling each other, the strawberry tongue is the only distinguishing feature in favor of Scarlet Fever.

So, when a question of diagnosis about such diseases arises between the one physician and the other, must the family physician of fine standing in whom the family has implicit faith, who is in touch with his patient from the beginning and is positive, be over-ruled by the one who sees the case several weeks afterwards for five or ten minutes at most? There is no doubt that both of these gentlemen in their respective positions deserve respect, but, it is possible to be fair to them both and still exercise due care. Nor is it proper, under the circumstances to be suspicious of every physician who has a run of sore-throats among his family patients at this time of the year which do not turn out to be Scarlet Fever.

The man who says he does, did, and will continue to report all cases of sore-throats and swollen necks as Scarlet Fever, without any other characteristic symptom is the type that bears watching. He may be a little over-zealous. And the physician who six weeks after sickness, diagnoses through

a neighbor's irresponsible talk, a brother physician's case, then starts in to make trouble without any formal regard to medical etiquette belongs either to the "ignoramus" kind or to the "slick rascal" kind.

In all the schools when a few children were sent out on Jan. 6th for suspected Scarlet Fever peeling, not one school has had a second case reported, and today, on the 22d day of January, a period of 16 days intervening, the same record prevails, showing thereby that at times the family physician merits his share of respect at the hands of the Health authorities.

Cases reported in 1912, with the ages, as compiled from Jan. 1, 1912 to Dec. 31, 1912 inc.

<u>Under 1 yr.</u>	<u>1 yr. to 5</u>	<u>5 yrs. to 8</u>	<u>8 yrs. to 15</u>	<u>15 yrs. to 20</u>	<u>20 yrs. to 25</u>
15	228	195	252	55	37
<u>25 yrs. to 30</u>	<u>30 yrs. to 35</u>	<u>35 yrs. to 40</u>	<u>40 yrs. to 45</u>	<u>45 yrs. to 50</u>	<u>50 yrs. to 55</u>
34	28	9	13	1	6

### MORTALITY.

There were reported during the year 873 cases, and there were six deaths, as follows:—

March 26, 1912.....Age 2 yrs.  
 Oct. 25, 1912.....Age 2 yrs.  
 Dec. 14, 1912.....Age 2 months  
 Dec. 16, 1912.....Age 4 months  
 Dec. 23, 1912.....Age 1 yr., 3 months  
 Dec. 25, 1912.....Age 3 months

Mortality rate, .00687.

**PREDISPOSITION TO SCARLET FEVER.**

Age:—As to predisposition, age comes first. The disease is very rare under 1 year. Up to 5 years, the susceptibility increases and reaches its maximum. After 8 years it decreases and is very slight during adult life.

Total number of cases under 1 year and from 1 year to 5 (inc.), 243.

Total number of cases from 5 years to 55 years (inc.), 630.

In other words, including the cases under 1 year with the cases from 1 year to 5 years inclusive, the period of age which ranks first in predisposition, in which should be the greater number of cases of Scarlet Fever, the opposite is strikingly heavy.

Statistics gathered in Scarlet Fever epidemics show 85 per cent. of the cases under the eighth year.

In the present epidemic, from 1 year to 8 years inclusive, the number totals 423.

The remainder totals 450.

In other words, the supposed 85 per cent. is represented in a figure of 423. The would-be 15 per cent. is represented in a figure of 450—very much out of the ordinary.

873 cases were reported this year, and 85 per cent. of these would be 742. The remaining 15 per cent. would be the difference—131. Verily, in consideration of these figures and other side-lights of the epidemic of 1912, one cannot help but feel that the epidemic carries a tingle of simple sore-throats, swoolen necks, and many other things in the line of skin rashes.

The mortality rate also is extremely low. Epidemics of Scarlet Fever differ remarkably in severity and the mortality is variable. However, the death rate is always considerable, ranging from 5 to 10 per cent. in mild epidemics, to 20 and 30 per cent. in the very severe.

The present Scarlet Fever epidemic death rate is approximately 2.3 of 1 per cent. or .00687.

The question is a natural question: "How much of this epidemic is Scarlet Fever?"

### III.

#### POLITICAL SITUATION AS TO THE UNFAIRNESS OF POLITICAL INTERESTS IN THIS EPIDEMIC OF 1912.

It would be unfair to the epidemic of 1912 without passing upon the remarkable activity of the political affiliations.

The Courier-Citizen, a daily local newspaper with the apparent assistance of a few medical friends, especially conspicuous, also of powerful influence at the proper psychological moment, was a very hard worker. All these seemed to understand one another in concerted action. Apparently there was formulated a well organized plan of campaign work. From the very first began a series of misrepresenting articles to the public as to the real situation. Its unfair attitude was directed particularly towards the Actual Chairman with a seemingly now and then ardent appeal to a former Chairman of the Board of Health to please come forward and save the people. On Oct. 10, 1912 it was pleased to say:—"Notwithstanding that Scarlet Fever has been rife for weeks past, Dr. Pierre Brunelle, Chairman of the Board of Health, gives over his duties for two weeks and goes away on a vacation." The real truth of it was, Dr. Brunelle never intended a two weeks' vacation and was actually in town, as the Courier-Citizen well knows, that very day this unfair and misrepresenting bit of news was sent throughout the city. As no individual has a press to offset such lies, so it went. From past experiences, however, this is its usual way of introducing to the public of Lowell a bird not feathered like itself.

It is interesting to note, however, that up to October 10, 1912 we had reported at the Board of Health office 248 cases of Scarlet Fever and one death as compared with the same corresponding period of 1910 when Dr. Martin was Chairman of the Board when there were 239 cases reported and 36 deaths. Striking how well all these parties could contemplate with eloquent silence the wonderful and inscrutable ways of Providence in 1910!

But, the next day, when the above figures were set before it, the following explanation appeared in the *Courier-Citizen*:—"The total number of cases this year compares not unfavorably with the number of cases of some previous years, however, no epidemic was feared nor was it talked about." Quite true, and its actual campaign right through to all just appearances as in the above, is here laid bare. Talk and fear seems to be the programme formulated, the purpose of which is given in a quotation of Carlyle's:—"More strained the mind, especially if the strain is induced by fear, the more vivid are the unrealities it conjures up." Through the misrepresenting articles that appeared now and then, the people were gradually led into a state of alarm. They were brought to a pitch of excitement and unrest. That there was created through this, a wide field amongst the bewildered public for anybody who was disposed to boost the epidemic, there can be no mistake. Prior to Dec. 7th, 1912 the disease was in a prosodemic state as compared to what was coming, but on Dec. 7th, 1912, three days before the City elections, with an affiliated political ally of the interests to all appearances, a candidate for municipal office and whose ideas on Health matters were in keeping with those of the *Courier-Citizen*, the epidemic came with a jump and held on until shortly after the 16th of December when the conference of doctors took place. At the summons of His Honor, Mayor James E. O'Donnell, there were called together Drs. Simpson, McCarty, Martin, Lamoureux, Mr. Robinson, the present members of the Board of Health, Mr. Bates, Agent, Mr. O'Hare, Secretary, and representatives of the local newspapers, to deal with the actual epidemic. After Dr. McCarty had very well elucidated the subject before the meeting, i.e., the present epidemic, also that of past years; Dr. Simpson and Dr. Carroll had set forth the regular inspection system of dairies, the people connected with these and the milk-plant in question; with this opportunity, notes were compared by the chairman of 1912 with those of the Chairman of



1910 as to their respective records concerning epidemics and the milk question, demonstrating clearly that the city was not in the throes of the most serious epidemic ever known. A general discussion followed. It was the consensus of opinion, however, that a competent inspector should supervise pasteurization, as it was in the milk-dealer's plant, to see there would be no "hitch" in this process of pasteurizing. Mr. Melvin Master possessing all the qualifications necessary, was assigned this duty. His daily presence there showed conclusively there was no "hitch" in the process of pasteurization, and the results therefrom were perfect. Public confidence was restored and the epidemic gradually fell. It is well to remark here, the French-American population, combined with that of the Greek, Polish and other nationalities such as the Portuguese, Italian, etc., approximately a population of 50,000 people, shows for a period since the 1st of August to the last of the year a total of but 42 cases of Scarlet Fever. Ostensibly these good people do not associate nor come much in contact with the Courier-Citizen, and they escape the virulence of infection. With these recent sad occurrences in mind, can it be possible that it was planned beforehand to have this talk inspire the people with fear so the epidemic might reach the Chairman?

Throughout the stinging storm of denunciation, happily from certain quarters only, the present Board never wavered, but kept along its clear and just course, notwithstanding unreasonable requests of the Board by powerful organizations "medically tipped," to do this and that thing, undoubtedly with the object in view, through concerted efforts to rush the members of the Board of Health into a corner from which it could never extricate itself with good grace in the eyes of the general public.

The ultimate goal of the Board of Health was fairness and it kept right straight ahead regardless. If this sudden jump in the so-called epidemic was due to the diseased udder of the cow, then it never was Scarlet Fever, and the prompt

action in this matter by the Health authorities is commendable. If it was Scarlet Fever, why could not these few medical lights who were in the habit of meeting secretly, come forward and lend to their brothers in profession of the Board of Health a helping hand in imparting some of their fine medical knowledge about Scarlet Fever, which they chose to keep in secret behind closed doors?

The medical profession as interpreted by any member of the Massachusetts Medical Society is that of a grand society, held together by such cementing bonds of honor, skill, courtesy and trustworthiness. Inspired by such noble thoughts of action, why in the name of good sense and fairness, did these few medical men persist in meeting secretly to embarrass the members of the board of Health? It was a miserable exhibition and a hard fight was forced upon us through no fault of ours, and although, it is true, at times we struck back, ours was a fair and square fight, and to our credit it must be said, we never hit below the belt.

In conclusion we wish to offer our sincere thanks and appreciation to His Honor, the Mayor, for his fine sense of justice and broadmindedness in this aggravating question; individually, to the members of the Board, for his assistance and respectful feeling for the same; to Dr. Simpson, State Inspector and Dr. Carroll of the local Board for their efficient and painstaking work; to Dr. T. B. Smith, Bacteriologist, for his excellent laboratorial system; to Dr. Hamblet, Mr. Melvin Master, and in fact every one connected with the office from the Agent down, for the patient and intelligent manner in which each and all dealt with a situation such as was cast upon them in the year of 1912."

PIERRE BRUNELLE, M. D., Chairman,  
JOHN A. OSGOOD,  
THOMAS F. CARROLL, M. D.,  
Board of Health



## MEDICAL INSPECTION of PRIVATE SCHOOLS.

Number of calls.....	352
Number examined .....	<b>4328</b>
Number advised .....	932
Number excluded .....	<b>67</b>

The following will give a general idea of the character of the cases examined:—

Adenitis .....	4
Anaemia .....	11
Adenoids .....	24
Abscess of Neck.....	1
Abscess of Eyelid.....	1
Bronchitis .....	2
Blepharitis .....	4
Chickenpox .....	1
Carious Teeth .....	45
Chorea .....	4
Conjunctivitis .....	6
Cyst of Eyelid.....	1
Chapped Hands .....	2
Cold .....	1
Diarrhoea .....	1
Eczema .....	5
Enlarged Tonsils .....	69
Enlarged Glands of Neck.....	1
Furunculosis .....	4
Foreign body in eye.....	<b>4</b>
Follinular Tonsillitis .....	1
Headache .....	3
Herpes Zoster .....	2
Incontinence of Urine .....	1
Impaired Vision .....	34
Impetigo .....	6
Inflamed Eyelid .....	3
Jaundice .....	1

Measles .....	6
Nasal Obstruction .....	1
Nits .....	61
Otitis Media .....	5
Pus Infection of Chin.....	3
Pulmonary Tuberculosis .....	3
Ringworm .....	8
Strabismus .....	7
Sore Throat .....	4
Scabies .....	2
Septic Thumb and Fingers.....	6
Suspected Scarlet Fever.....	20
Tonsillitis .....	2
Unvaccinated .....	85
Ulcerated Tooth .....	1
Wax in Ear.....	17
Warts .....	1
Wen .....	1
Whooping Cough .....	5

During the year talks were given by the physicians to the children on care of teeth, ears and hair; dangers of putting foreign bodies in mouth, such as pens and pencils; proper positions in seats; evils of nicotine habit.

Rubbers and leggings were ordered removed. Children were sent home for their glasses. Lock was removed from front door of one school. In another school, the physician ordered the opening of an additional room on account of the overcrowded state.

## INSPECTOR OF MILK

---

Lowell, Mass., Jan. 1, 1913.

To the Lowell Board of Health.

Gentlemen:—

I have the honor to present the report of the Department of Milk, Vinegar and Oleomargarine Inspection for the twelve months beginning Jan. 1, 1912.

Twenty-five hundred and fifty-seven samples of milk have been analyzed chemically for the percentage of total solids and butter fat. Several samples of milk seized from milk wagons showed the presence of added water. These cases were prosecuted. One case of added water to milk taken from a restaurant was prosecuted. Fifty-six samples of milk were seized from restaurants. Eighteen samples of milk taken from restaurants showed slight violations of the milk laws, but the restaurants were notified and no prosecutions were made.

About three hundred and fifty samples of milk sediment were examined during the year. Dr. Slack's method was used. During the Scarlet Fever epidemic over one hundred samples of milk were examined from one milkman's supply. Cultures and sediment tests were made. Staphylococci, diplococci, bacilli, and in a few cases streptococci were found. Beginning Dec. 19, 1912 and continuing through date, the pasteurizing of a portion of one milkman's supply has been under the supervision of the milk department.

### STORES.

Over one thousand application blanks for milk licenses were sent out during the month of February to the stores of Lowell. During March and April, seven hundred and nine stores were visited and licenses were desired.

**COURT CASES.**

There were five prosecutions during the year.

**VINEGAR.**

There were forty-two samples of vinegar analyzed. No violations.

**BUTTER.**

Numerous samples of butter were tested. One prosecution followed. Case appealed to Superior Court.

**DAIRY INSPECTION.**

The recent Scarlet Fever epidemic should forcibly impress on our minds the need of dairy inspection. For two months during the year (through date) one dealer pasteurized part of his milk each day. He was compelled, through no fault of his own, to remedy a condition that should never have been allowed to exist. In places like Boston and New York where milk must come from long distances, it may be safer to pasteurize, in fact, it is necessary or a large portion of the remote supply would spoil before consumption. But here in Lowell, most of the milk is collected within a radius of eleven miles, or within team haul. The oldest milk should not be more than fifteen hours old when it reaches the milk dealer's plant. Within fifteen hours more the milk has been delivered. If this milk has been properly looked after during the milking, and is immediately and properly cooled after the milking, it should be in good condition, free from dirt, and a high bacterial count, when it arrives at the milk-dealer's plant. We have little to complain of with our milk-dealer's handling of the milk when he has it at his plant. The principal trouble at present is with the dairy. If conditions are improved at the dairy, our milk will need pasteurizing but rarely. It is very easy to inform the milkman to look after his raisers, but he is unable to accomplish much, as the producer will tell him that if he is not satisfied with the milk de-

livered to him, he can cease taking it, as the producer has other men who will take his milk, or he will send it to Boston. It would seem that a competent dairy inspector could remedy much of the present trouble by instructing the farmer how to improve conditions at his milkings. A spirit of co-operation and competition could be established between the farmers, milk-dealers and health boards. If a farmer were given one quarter of a cent per quart for using a small top pail, one quarter of a cent per quart for brushing his cows before milking and icing his milk immediately after the milking, or some such inducement, it might raise the price of milk one half a cent per quart, but if the Populace wants clean milk, it must pay the necessary price. In most towns of any size in the State, milk is sold for nine and ten cents per quart.

A clause in the milk laws states that a man producing his own milk may sell it to consumers if his milk sales do not exceed twenty quarts per day, without a license. Now, very frequently a producer has a difference with his milk-dealer because the milk-dealer asks him to remedy certain conditions in handling his milk. The producer refuses to sell his milk to the dealer any longer, and proceeds to come to town every day with his milk, often times with less than twenty quarts, which has been improperly handled. He has no facilities for cleaning his bottles or cans, does not know the laws governing the sale of milk, does not know whether his water supply is safe, sells his milk for whatever price he can get, and endangers the health of the community through his ignorance. With a dairy inspector, a record could be kept of all dairy farms, and dangers to the public would be lessened; a course of instruction and enlightenment would gradually be given to the producer of milk who is now ignorant of the dangers to which he is constantly exposing the consumers of milk.

**LICENSES.**

Wagon licenses issued.....	72	\$ 36.00
Store licenses issued.....	460	230.00
Oleomargarine licenses issued.....	13	6.50
Total .....	545	<u>\$272.50</u>

Respectfully submitted,

MELVIN F. MASTER,  
Inspector of Milk and Vinegar.

## INSPECTOR OF MEATS AND PROVISIONS

---

Lowell, Mass., January 1, 1913.

Board of Health,

Lowell, Mass.

Gentlemen:

The following is a report of the work done by the Inspector of Meats and Provisions for the year 1912:

### Inspection of Stores.

Number of inspections made of stores.....	4896
Number of pieces of meat condemned as unfit for food..	10

### Inspection of Meat at Time of Slaughter.

Number of Carcasses of Swine.....	378
Number of Carcasses of Cattle.....	4

Fifty-two milk rooms and forty-six dairies were inspected.

Four horses having glanders and seven dogs having rabies were condemned and reported to the Mass. Department of Animal Industry.

C. A. HAMBLET, M. D. V.



## REPORT OF PLUMBING INSPECTOR

---

Lowell, Mass., January 1, 1913.

Board of Health,  
Lowell, Mass.

Gentlemen :

The following is a report of the plumbing work done for the year ending December 31 1912:

Whole number of applications for permits to do plumbing . . 849

New Buildings .....214

Old Buildings .....635

———— 849

Total number of visits .....2547

Respectfully,

STEPHEN GARRITY,

Plumbing Inspector.

## REPORT OF TENEMENT HOUSE INSPECTOR

---

Lowell, Mass., January 1, 1913.

Board of Health,,  
Lowell, Mass..

Gentlemen :

The following is a report of work done by me for the year ending December 31, 1912:

Tenements inspected .....	772
Stores inspected .....	85
Bakeries inspected .....	45
Amusement Houses inspected.....	10
Complaints investigated .....	118

During the months of November and December, I assisted the contagious disease inspector.

Yours truly,

WILLIAM H. CONNORS,  
Tenement House Inspector.

Notices to abate the following nuisances were sent from this office during the year 1912.

Clogged sink waste pipes.....	6
No water supply to sinks.....	1
Leaky sink waste pipes.....	12
Leaky sink traps.....	5
Untrapped sinks .....	2
No cover on sink traps.....	5
Insufficient supply of water to water closets.....	13
Leaky water closets .....	10
Dilapidated woodwork around water closets.....	4
Dilapidated woodwork around sinks.....	2
Filthy stables .....	2
Leaky water supply pipes.....	3
Clogged drains .....	13
Open drains .....	6
No water supply to water closets.....	37
Rubbish in cellar.....	78
Rubbish in yards.....	137
Defective joints in sink waste pipes.....	18
Ceilings whitewashed .....	33
Clogged water closets.....	17
Filthy water closets .....	4
Leaky roofs .....	5
No water supply to tenements.....	30
Unsealed sink traps.....	2
Manure in yard.....	1
Filthy tenements .....	6
Hens in cellar.....	1
Improper material for sink waste.....	1
Surface drainage .....	1
Open connections in soil pipes.....	3
Open connections in back vent pipes.....	4
Open connections in sink waste pipes.....	6
Overflowing ash barrels.....	2

Pigs ordered removed.....	1
Rubbish in sheds.....	6
Rubbish on roofs.....	1
Leaky water closet tanks.....	2
Plaster off ceilings.....	4
Frozen water pipes.....	35
Overflowing dry wells.....	1
Surface water running into cellar.....	1
Loose covers on sink traps.....	1
No bowl to water closet.....	1
Improperly connected refrigerator.....	1
No covers to house traps.....	2
Clogged cesspools .....	3
Unsealed water closet traps.....	2
Overflowing ash pits.....	2
To ventilate water closet apartments.....	2
Sink traps tied with rags.....	2

#### CASES OF CONTAGIOUS DISEASES REPORTED.

	1912	1911	1910	1909
Diphtheria, including Croup.....	140	159	164	205
Scarlet Fever .....	873	226	304	100
Measles .....	862	159	1194	333
Typhoid Fever .....	86	61	186	91
Smallpox .....	2	0	0	0
Cerebro-Spinal Meningitis.....	6	15	6	7
Infantile Paralysis .....	9	18	8	0
Tuberculosis .....	167	148	149	154
	2145	786	2011	890

## DEATHS FROM CONTAGIOUS DISEASES.

	1912	1911	1910	1909
Diphtheria, including Croup.....	16	15	20	34
Scarlet Fever .....	6	5	38	9
Measles .....	50	8	20	4
Typhoid Fever .....	10	7	22	11
Smallpox .....	0	0	0	0
Cerebro-Spinal Meningitis.....	6	9	6	5
Infantile Paralysis .....	3	2	0	0
Tuberculosis .....	151	159	146	159
	<hr/> 242	<hr/> 205	<hr/> 252	<hr/> 222

In 1912 there were 742 fumigations, 116 of which were for Tuberculosis. In all 1793 rooms were fumigated.

There were 1967 vaccinations.

30 Undertakers' licenses were granted during the year.

CASES OF DIPHTHERIA AND CROUP REPORTED TO  
THE BOARD OF HEALTH FOR THE YEAR 1912.

	Diphtheria		Croup	
	Cases	Deaths	Cases	Deaths
January .....	18	1	0	0
February .....	9	2	0	0
March .....	5	1	0	0
April .....	8	0	0	0
May .....	5	0	0	0
June .....	11	2	0	0
July .....	15	1	0	0
August .....	4	0	0	0
September .....	14	1	0	0
October .....	17	2	3	0
November .....	15	0	2	2
December .....	14	4	0	0
	<hr/> 135	<hr/> 14	<hr/> 5	<hr/> 2

Mortality of Diphtheria, 10.4 per cent.

## MORTALITY OF DIPHTHERIA.

	1894	33.0 per cent.
	1895	44.0
Antitoxin Treatment	1896	43.0
	1897	23.0
	1898	23.0
	1899	18.0
	1900	10.0
	1901	12.0
	1902	9.5
	1903	10.5
	1904	11.0
	1905	6.0
	1906	9.0
	1907	7.5
	1908	7.0
	1909	12.5
	1910	9.2
	1911	9.7
	1912	10.4

Lowell, Mass., January 1, 1912.

To the Members of the Board of Health,  
Lowell, Mass.

Gentlemen:—

I have the honor to submit to you the following report of the work done by me in the Bacteriological Laboratory during the year ending Dec. 31, 1912:—

## DIPHTHERIA.

### Examination of Cultures.

	For Diagnosis		For Release		No.	Whole
	Positive	Negative	Positive	Negative	Result	No.
January .....	17	32	27	26	0	102
February .....	8	44	14	19	2	87
March .....	8	35	7	6	0	56
April .....	7	34	13	7	1	62
May .....	5	32	14	6	1	58
June .....	12	29	5	8	0	54
July .....	8	38	4	16	2	68
August .....	4	38	1	5	0	48
September .....	11	62	8	10	1	92
October .....	21	48	12	16	1	98
November .....	15	53	9	19	1	97
December .....	10	117	7	14	0	148
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	126	562	121	152	9	970



## TUBERCULOSIS.

## Examination of Sputum.

	Positive	Negative	No. Result	Whole No.
January .....	10	29	0	39
February .....	16	20	0	36
March .....	10	24	0	34
April .....	10	34	0	44
May .....	13	33	0	46
June .....	6	23	0	29
July .....	9	23	1	33
August .....	9	28	0	37
September .....	8	32	0	40
October .....	7	25	0	32
November .....	6	36	0	42
December .....	10	40	0	50
	<hr/> 114	<hr/> 347	<hr/> 1	<hr/> 462

During the year, a patient was reported to the Board of Health as a case of Consumption and recommended for admission to one of the State Sanatoria. Four successive sputum examinations in the case proved negative however, and a special examination of the patient was made by the Board of Health which showed evidence of the presence of Empyema following Pneumonia instead of Consumption. A surgical operation was recommended, which was performed, and has been followed by recovery.

## TYPHOID FEVER.

## Examination of Blood for Widal Reaction.

	Positive	Negative	No. Result	Whole No.
January .....	5	19	0	24
February .....	3	22	0	25
March .....	7	30	0	37
April .....	1	17	0	18
May .....	2	22	1	25
June .....	3	37	1	41
July .....	6	16	0	22
August .....	13	40	1	54
September .....	20	20	0	40
October .....	19	29	0	48
November .....	12	41	0	53
December .....	11	30	1	42
	102	323	4	429

## MALARIA.

Five specimens were examined for Malaria, all of which proved negative.

## OPHTHALMIA NEONATORUM.

A few specimens of pus from cases of Ophthalmia Neonatorum were received during the year, all of which showed the presence of gonococci.

The number of such specimens sent in for examination is still far out of proportion to the number of cases of the disease which are occurring all the time, though the opportunity of bacteriological examination in such cases has been offered by the Board of Health for a number of years. The importance of early certain diagnosis in cases of this disease to prevent ulceration of the cornea and blindness cannot be exaggerated.

## OTHER EXAMINATIONS.

Other numerous examinations were made in cases of pneumonia, urethritis, abscess and septic wounds.

A series of tests of suture material was also made.

150 examinations of milk cultures and milk sediments were made during the recent epidemic of Scarlet Fever.

Respectfully,

THOMAS B. SMITH, M. D.

Bacteriologist.

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Our expense at the Lowell Hospital for 1912 was \$595.48 as compared with \$156.25 in 1911:—

Alice Sullivan .....	\$ 84.00
Michael Meal .....	14.
Margaret Rosenberg .....	46.
Pearl Fowler .....	42.
James Hayes .....	28.
Alice Ouelette .....	22.55
Edward B. Clough.....	3.93
James Hayes .....	2.
Florence Woodbury .....	9.
Edward Bevins .....	2.
Francis Campbell .....	80.
E. Pepenard .....	6.
Bernatle Sowrent .....	20.
Paul Polinski .....	30.
Stavoula Kostopoulos .....	92.
Thomas Beane .....	88.
Cecile Belanger .....	26.

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\$595.48

## SCARLET FEVER.

	1912	1911	1910	1909
Cases reported .....	873	226	304	100
Deaths .....	6	5	38	9
Per cent total cases.....	006	2	12	9

	Cases	Reported	Deaths
January .....	31	0	
February .....	17	0	
March .....	33	1	
April .....	14	0	
May .....	22	0	
June .....	4	0	
July .....	12	0	
August .....	30	0	
September .....	55	0	
October .....	116	1	
November .....	99	0	
December .....	<u>440</u>	4	
	873	6	

## MEASLES.

	Cases	Reported	Deaths
January .....	57	1	
February .....	71	8	
March .....	91	5	
April .....	91	1	
May .....	248	18	
June .....	164	12	
July .....	51	5	
August .....	5	0	
September .....	11	0	
October .....	25	0	
November .....	38	0	
December .....	<u>10</u>	0	
	862	50	

## TYPHOID FEVER.

	Cases Reported	Deaths
January .....	4	0
February .....	2	2
March .....	7	1
April .....	2	2
May .....	5	1
June .....	3	1
July .....	8	3
August .....	6	0
September .....	14	0
October .....	16	0
November .....	10	0
December .....	9	0
	<hr/> 86	<hr/> 10

## TYPHOID FEVER.

	Population	Reported Cases	Deaths
Total 1912 .....	106294	86	10
Total 1911 .....	106294	61	7
Total 1910 .....	106294	186	22
Total 1909 .....	96380	91	11
Total 1908 .....	96380	188	24
Total 1907 .....	96380	73	9
Total 1906 .....	96380	30	7
Total 1905 .....	94889	56	17
Total 1904 .....	104402	48	17
Total 1903 .....	101959	238	26
Total 1902 .....	99574	83	16
Total 1901 .....	94969	70	18
Total 1900 .....	94969	85	17

## BOARD OF HEALTH

43

Total 1899 .....	90114	57	17
Total 1898 .....	87000	119	24
Total 1897 .....	87000	105	18
Total 1896 .....	95700	178	36
Total 1895 .....	84359	172	33
Total 1894 .....	83026	282	50
Total 1893 .....	81694	160	53
Total 1892 .....	80361	373	75
Total 1891 .....	79029	293	77
Total 1890 .....	77696	454	123

A decrease from 1.59 per thousand inhabitants to .09 in twenty-three years.

## PLACES OF DEATH.

Ward 2 .....	1
Ward 3 .....	1
Ward 7 .....	1
Ward 9 .....	1
Lowell Hospital .....	4
Lowell General Hospital .....	2

---

 10

Males 3      Females 7      Oldest 49 yrs.      Youngest 1 year

## DEATHS FROM CHOLERA INFANTUM.

	1912	1911	1910	1909
January .....	0	0	0	0
February .....	0	0	0	0
March .....	0	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
Total first quarter .....	0	0	0	0
April .....	0	0	0	0
May .....	0	1	0	0
June .....	3	7	8	1
	<hr/>	<hr/>	<hr/>	<hr/>
Total second quarter .....	3	8	8	1
July .....	7	46	63	19
August .....	10	16	19	25
September .....	5	1	3	16
	<hr/>	<hr/>	<hr/>	<hr/>
Total third quarter.....	22	63	85	60
October .....	0	1	2	3
November .....	0	0	0	0
December .....	0	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
Total fourth quarter .....	0	1	2	3
Total for year .....	25	72	95	64

## VITAL STATISTICS

	1912	1911	1910	1909
Deaths, male .....	981	985	1045	922
Deaths, female .....	910	940	1055	963
	<hr/>	<hr/>	<hr/>	<hr/>
	1891	1925	2100	1885
Children under 1 year.....	505	484	607	494
Children under 2 years.....	627	581	735	593
Children under 5 years.....	697	648	835	671
Per cent of total deaths under 5 years.....	36.9	33.6	39.8	35.6



## BIRTHPLACE.

	Of Deceased Of Parents	
Lowell .....	869	243
Massachusetts .....	115	189
Other States .....	234	458
Ireland .....	286	972
Canada .....	205	877
Great Britain .....	101	281
Other Countries .....	62	545
Unknown .....	19	217
	<hr/>	<hr/>
	1891	3782

## PLACES OF INTERMENT.

St. Patrick's Cemetery.....	781
Edson .....	363
Westlawn .....	44
Lowell .....	58
St. Joseph's .....	429
St. Peter's .....	30
Other Cemeteries .....	8
Removed .....	178
	<hr/>
	1891

## PLACES OF DEATH.

Ward 1 .....	115
Ward 2 .....	200
Ward 3 .....	159
Ward 4 .....	158
Ward 5 .....	183
Ward 6 .....	346
Ward 7 .....	143
Ward 8 .....	116
Ward 9 .....	112
Chelmsford St. Hospital.....	103
Lowell Hospital .....	99
Lowell General Hospital.....	71
St. John's Hospital .....	86
	<hr/>
	1891
Still Births during year, 105	

## DEATH RATE.

Population, census	.....	1890	77,696	1959	25.21
estimated	...	1891	79,029	1972	24.95
estimated	...	1892	80,361	2224	27.67
estimated	...	1893	81,694	2094	25.62
estimated	...	1894	83,026	1775	21.28
census	.....	1895	84,359	1857	22.01
estimated	...	1896	85,700	1901	22.18
estimated	..	1897	87,000	1855	21.33
estimated	...	1898	87,000	1808	20.78
estimated	...	1899	90,114	1848	20.50
census	.....	1900	94,969	1849	19.47
estimated	..	1901	94,969	2038	21.45
estimated	...	1902	99,574	1935	19.43
estimated	..	1903	101,959	1898	18.61
estimated	...	1904	104,402	1736	16.61
census	.....	1905	94,889	1899	20.02
census	.....	1906	96,380	1918	19.90
census	.....	1907	96,380	2063	21.40
census	.....	1908	96,380	1963	20.36
census	.....	1909	96,380	1885	19.55
census	.....	1910	106,294	2100	19.76
census	.....	1911	106,294	1925	18.11
census	.....	1912	106,294	1891	17.79



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CAUSES OF DEATH	AGE																				SEX			
																					Males	Females		
	Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over
TOTAL FOR 1912																								
GENERAL DISEASES—Continued.																								
35 Scrofula.....																								
36 Syphilis.....																								
3 Tertiary.....																								
4 Hereditary.....																								
37 Bleorrhagia of the adult....																								
38 Gonococcal infections of the child.....																								
39 Cancer and other malignant tumors of the buccal cavity.....	3																1				2			3
40 Cancer and other malignant tumors of the stomach and liver.....	32	1			1									2	2	6	9	4	7	1				18
41 Cancer and other malignant tumors of the peritoneum, intestines, and rectum....	5															1		1	2	1				1
42 Cancer and other malignant tumors of the genital organs of the female.....	10													1	4	2	1		1	1				10



CAUSES OF DEATH	TOTAL FOR 1912	AGE																SEX								
																		Males	Females							
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over	
GENERAL DISEASES—Continued.																										
43 Cancer and other malignant tumors of the breast. ....	4											1		2				1								
44 Cancer and other malignant tumors of the skin.....	2															1									1	
45 Cancer and other malignant tumors of organs not specified.....	29								1	1	1	1		1	5	3	1	5	4	1	3	3				
46 Other tumors (tumors of the female genital organs excepted).....	2																		2							
47 Rheumatism, acute, articular..	3							1	1										1							
48 Rheumatism, chronic, and gout.....	1																			1						
49 Scorbutus.....																										
50 Diabetes.....	14							1	1												1					
51 Goitre, exophthalmic.....	1																									
52 Addison's disease.....	1																									
53 Leukemia.....	1																									
54 Anemia, chlorosis.....	7																	2	1	2						

CAUSES OF DEATH	TOTAL FOR 1912	AGE																			SEX						
																					Males	Females					
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over		
GENERAL DISEASES—Continued.																											
55 Other general diseases.....																											
56 Alcoholism, acute and chronic.....	8											1	2	3				1		1						4	4
57 Saturnism.....																											
58 Other trade intoxications.....																											
59 Other chronic poisonings.....																											
Total general diseases.....	385	40	31	23	5	1	100	11	6	24	16	24	20	24	25	22	30	24	16	23	7	6	5	1	1	171	214
II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SENSE.																											
60 Encephalitis.....																											
61 Meningitis, simple.....	21	13	3			1	17						1	1					1		1					17	4
61a Meningitis, epidemic cerebro-spinal.....	6	2	1				3			1	1				1											1	5
62 Locomotor ataxia, progressive.....	5														1	2	1	1								3	2
63 Other diseases of the spinal cord.....	6								1		1							1	1	1	1					2	4
64 Cerebral congestion and hemorrhage.....	95	1					1					2	1	2	2	7	10	10	14	15	12	5	8	5	1	42	53









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CAUSES OF DEATH	TOTAL FOR 1912	AGE																	SEX									
																			Males	Females								
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over			
PUERPERAL STATE—Concluded.																												
139 Albuminuria and puerperal eclampsia .....	5	...	...	...	...	...	...	...	...	1	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	
140 Phlegmasia alba dolens, puerperal .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
141 Other puerperal accidents—sudden death .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
142 Puerperal diseases of the breast .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total puerperal .....	9	1	...	...	...	1	...	...	1	3	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	8	
VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.																												
143 Gangrene .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	2	1
144 Furuncle (carbuncle) .....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
145d Phlegmon, warm abscess .....	3	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	3	...
146 Other diseases of the skin and its adnexa .....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total skin tissue .....	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	1	1	...	...	1	...	5	1

CAUSES OF DEATH	TOTAL FOR 1912	AGE																SEX									
																		Males	Females								
		Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over		
IX. DISEASES OF THE ORGANS OF LOCOMOTION.																											
147 Affection of the bones (non-tuberculous).....	3	2	1	.....	.....	.....	3	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
148 Arthritis and other affections of the articulations (tubercle and rheumatism excepted) ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
149 Amputation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
150 Other affections of the organs of locomotion.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total organs locomotion.....	3	2	1	.....	.....	.....	3	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
X. MALFORMATIONS.																											
151 Malformations, congenital (still births excepted) .....	22	20	1	1	.....	.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	10
XI. EARLY INFANCY.																											
152 Congenital debility, icterus and sclerema.....	112	110	2	.....	.....	.....	112	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63	49
153 Other diseases appertaining to infancy.....	8	8	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	5
154 Lack of care.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total early infancy.....	120	118	2	.....	.....	.....	120	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66	54

CAUSES OF DEATH	AGE																				SEX						
																					Males	Females					
	Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over			
XII. OLD AGE.																				1	3	4	9	11	4	8	24
155 Senile debility.....																											
XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES.																											
156 Suicide by poison.....																				1							1
157 Suicide by asphyxia.....											1	1	1				1									3	1
158 Suicide by hanging or strangulation.....																			1								1
159 Suicide by submersion.....																											
160 Suicide by firearms.....														1			2									3	
161 Suicide by cutting instruments.....												1														1	
162 Suicide by jumping from high places.....																											
163 Suicide by crushing.....																											
164 Other suicides.....																											
165a Fractures.....																								1			1
166 Luxations.....																											
167 Other accidental traumatisms	53		2		2	3	1			3	5	5	6	2	8	5	2	7	1	3						41	12



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CAUSES OF DEATH	TOTAL FOR 1912		AGE																								SEX	
	Under 1 year	1 year and under 2 years	2 years and under 3 years	3 years and under 4 years	4 years and under 5 years	Total under 5 years	5 years and under 10 years	10 years and under 15 years	15 years and under 20 years	20 years and under 25 years	25 years and under 30 years	30 years and under 35 years	35 years and under 40 years	40 years and under 45 years	45 years and under 50 years	50 years and under 55 years	55 years and under 60 years	60 years and under 65 years	65 years and under 70 years	70 years and under 75 years	75 years and under 80 years	80 years and under 85 years	85 years and under 90 years	90 years and over	Males	Females		
ILL-DEFINED DISEASES—Concluded.																												
180 Non-specified or ill-defined causes of death.....	15	10	...	...	...	10	...	1	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	9	6	
Total ill-defined diseases.....	15	10	...	...	...	10	...	1	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	9	6	
TOTAL FROM ALL CAUSES.....	1891	505	122	40	20	10	697	37	24	38	34	57	59	59	85	85	110	99	118	130	91	68	53	35	12	981	910	



## COLLECTION OF ASHES.

	1912	1911	1910	1909
Jan. ....	2341 loads	2519 loads	2021 loads	2015 loads
Feb. ....	2388	1932	1681	1881
Mar. ....	2632	2605	2609	2264
Apr. ....	2695	2554	2214	2389
May ....	2279	2230	1875	1969
June ....	1875	1862	1731	1725
July ....	1893	1667	1570	1624
Aug. ....	1770	1681	1591	1477
Sept. ....	1717	1605	1571	1422
Oct. ....	2086	1904	1736	1789
Nov. ....	2294	2292	2101	1962
Dec. ....	2575	2421	2651	2236
	<hr/>	<hr/>	<hr/>	<hr/>
	26,545	25,272	23,351	22,753

## COST OF COLLECTION.

	Labor Pay Roll
1891 .....	\$ 8,000.19
1892 .....	9,857.42
1893 .....	11,542.94
1894 .....	12,087.93
1895 .....	10,591.40
1896 .....	11,311.25
1897 .....	12,793.15
1898 .....	11,209.70
1899 .....	10,903.30
1900 .....	10,665.36
1901 .....	10,651.28
1902 .....	10,454.80
1903 .....	9,691.50
1904 .....	10,714.95
1905 .....	11,035.00
1906 .....	10,771.75
1907 .....	10,747.55

1908 .....	11,212.60
1909 .....	11,431.05
1910 .....	12,986.64
1911 .....	14,365.15
1912 .....	14,936.67
300 loads of paper were collected.	

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NUMBER OF LOADS OF SWILL COLLECTED.

	1912	1911	1910	1909	
Jan. ....	470	loads 398	loads 396	loads 362	loads
Feb. ....	384½	371½	343	336	
Mar. ....	372½	391	376	370	
Apr. ....	375½	328	351	343	
May ....	399	399½	365	339	
July ....	411	375¼	364½	376	
June ....	375	415	384	373	
Aug. ....	496¼	515	467½	466	
Sept. ....	515½	560	542½	549½	
Oct. ....	489	438	430	448½	
Nov. ....	402½	386	388½	388	
Dec. ....	440½	402	438½	386½	
	<u>5131¼</u>	<u>4979¼</u>	<u>4846½</u>	<u>4737½</u>	

Total collections for 1912 .....	5131¼ loads
1911 .....	4979¼
1910 .....	4846½
1909 .....	4737½
1908 .....	4738½
1907 .....	4870 1-3
1906 .....	4653½
1905 .....	4323
1904 .....	4352
1903 .....	4031
1902 .....	4035
1901 .....	3861
1900 .....	4217

## SWILL ACCOUNT.

	1912	1911	1910	1909
Jan. ....	\$ 512.54	\$ 446.26	\$ 440.62	\$ 425.62
Feb. ....	421.91	410.63	378.75	391.26
Mar. ....	396.88	431.26	421.25	427.50
Apr. ....	404.40	360.01	397.50	395.
May ....	442.54	443.15	411.26	391.25
June ....	415.06	465.03	437.54	429.38
July ....	455.04	412.92	410.58	433.76
Aug. ....	556.63	566.31	531.83	535.64
Sept. ....	583.17	612.53	633.11	635.01
Oct. ....	547.55	465.05	489.98	520.64
Nov. ....	449.40	406.88	438.11	446.28
Dec. ....	493.15	425.03	495.61	435.01
Swill Licenses.....	460.	505.	525.	460.
	<hr/>	<hr/>	<hr/>	<hr/>
	\$6,138.27	\$5,950.06	\$6,011.14	\$5,926.35

588 loads were charged to the City Farm in 1912.

85 Swill Licenses were issued during the year.



Cost of Collecting Swill Labor Pay Roll	Disposition of Swill	Income From Swill	Cost of Burning	Amount Burned	Total Cost Collection and Cremation of Swill and Garbage
1884 No Analysis	Sold	\$2,671.85			
1885 " "	"	3,711.38			
1886 " "	"	4,711.38			
1887 " "	"	3,604.00			
1888 " "	"	2,739.85			
1889 " "	"	2,948.52			
1890 " "	"	3,166.00			
1891 \$6,000.00	"	3,945.57	Cost of Cremator (\$8,000.00)		\$13,593.02
1892 5,593.02	Burned	3,239.92			
1893 7,022.66	"		7,670.69	3500 tons	14,693.43
1894 7,122.00	"		5,742.77	3486 "	12,864.69
1895 7,035.97	"		3,662.53	2750 "	10,698.50
1896 7,064.97	"		3,543.34	2810 "	10,408.01
1897 7,234.76	Part Burned	2,369.99	2,612.07	2629 "	9,846.07
1898 7,758.20	and	2,445.40	1,644.21	874 "	9,302.41
1899 7,193.30	Part Sold	3,547.00	1,397.86	105 "	8,591.16
1900 7,083.30	All Sold	{ Cash 3,368.00 Hay 840.72	1,094.65	109 "	8,177.95

1901	\$7,027.75	All Sold	{ Cash Buggy Manure Hay	\$2,835.20 83.00 32.00 780.04	\$1,081.14	{ 35 tons 317 tons Markets	\$7,404.64
1902	7,259.00	"	{ Cash Hay	3,244.72 883.77	1,166.69	{ 11 tons Swill 415 tons Markets	8,425.69
1903	8,178.93	"	{ Cash Hay Manure	3,299.87 1,584.72 100.95	1,191.86	{ 600 tons Markets	9,370.79
1904	8,324.70	"	{ Cash Hay	3,507.41 2,047.84	992.92	{ 303 tons Markets	9,317.62
1905	8,318.50	"	{ Cash Hay	3,656.12 2,079.38	1,101.20	{ 664 tons Markets	9,419.70
{ 1906 Swill Market Ref.	8,721.80 1,665.88	"	{ Cash Hay	3,590.37 2,472.53	1,762.45	{ 1046 tons Markets	12,150.13
{ 1907 Swill Market Ref.	8,596.00 1,712.45	"	Cash	6,356.02	1,489.80	{ 1195 tons Markets	11,798.25
{ 1908 Swill Market Ref.	8,607.90 1,755.50	"	Cash	6,139.61	1,432.71	{ 1128 tons Markets	11,796.11
{ 1909 Swill Market Ref.	8,459.30 1,780.00	"	Cash	5,926.35	1,421.26	{ 1626 tons Markets	11,660.56
{ 1910 Swill Market Ref.	8,838.44 1,812.73	"	Cash	6,011.14	1,435.54	{ 1475 tons Markets	12,086.71
{ 1911 Swill Market Ref.	10,209.33 2,260.21	"	Cash	5,950.06	1,435.70	{ 1341 tons Markets	13,905.24
{ 1912 Swill Market Ref.	10,650.90 2,395.19	"	Cash	6,138.27	Crematory burned to ground early in the year		13,046.09

**FINANCIAL STATEMENT—EXPENDITURES.****PAY ROLLS—OFFICE.**

Jan. ....	\$652.00
Feb. ....	652.
Mar. ....	815.
April ....	652.
May ....	652.
June ....	815.
July ....	652.
Aug. ....	815.
Sept. ....	652.
Oct. ....	652.
Nov. ....	815.
Dec. ....	712.23
	<hr/>
	\$8,536.23

**PAY ROLLS—YARD.**

Jan. ....	\$3300.07
Feb. ....	3479.64
Mar. ....	4114.88
Apr. ....	3233.19
May ....	3157.88
June ....	3896.76
July ....	2989.01
Aug. ....	3578.52
Sept. ....	2877.
Oct. ....	2979.63
Nov. ....	3664.54
Dec. ....	3303.19
	<hr/>
	\$40,574.31



# ANALYSIS OF PAY ROLLS OF 1912 AS COMPARED WITH 1911.

	1912	1911	Increase	Decrease
Agent .....	\$ 1,835.00	\$ 1,820.00	\$ 15.00	
Contagious Disease Inspector .....	1,415.57	1,404.00	11.57	
Plumbing Inspector .....	1,256.00	1,248.00	8.00	
Tenement House Inspector .....	1,256.00	1,248.00	8.00	
Health Inspector.	1,099.00	1,092.00	7.00	
Meat Inspector..	942.00	936.00	6.00	
Registrar .....	732.66	728.00	4.66	
Temporary Clerk		40.00		40.00
Ashes .....	14,936.67	14,365.15	571.52	
Swill .....	10,650.90	10,209.33	441.57	
Dumps and Alleys	4,335.76	4,563.13		227.37
Cremator .....	165.00	915.75		750.75
Stable .....	2,451.77	2,397.63	54.14	
Fumigation .....	966.00	958.38	7.62	
Blacksmith .....	1,737.38	1,633.25	104.13	
Foreman .....	1,256.00	1,308.00		52.00
Market Refuse...	2,395.19	2,260.21	134.98	
Yardman .....	905.00	863.25	41.75	
Wheelwright ....	479.89	754.88		274.99
Painter .....	48.00	95.63		47.63
Smallpox .....	221.25		221.25	
Removing Coal...	25.50		25.50	
	<hr/> \$49,110.54	<hr/> \$48,840.59	<hr/> \$1,662.69	<hr/> \$1,392.74

Total Increase—\$269.95.

**ANALYSIS OF BILLS 1912****OFFICE SUNDRIES**

Advertising .....	\$ 19.95
Bacteriological Department .....	73.03
Express .....	8.65
Medical Services (Vaccinating and investigat ing causes of deaths) .....	371.00
Printed Supplies .....	135.49
Printing Annual Report .....	123.75
Sundries .....	218.03
Stamps and Envelopes .....	100.00
Telephone .....	12.32
Trip Book .....	20.25
Vaccine Plasters .....	17.50
	<hr/> \$1099.97

**CARE OF CONTAGIOUS DISEASES, ACTS OF 1907****CHAPTER 386**

Burials .....	21.00
Board .....	16.50
City of Boston .....	501.43
Cambridge City of .....	70.20
Culture Taking .....	20.00
Chelmsford St. Hospital .....	359.16
Day Nursery Association .....	10.00
Fuel .....	11.00
Fitchburg City of .....	36.43
Investigating Scarlet Fever Epidemic .....	30.66
Lowell Hospital .....	481.48
Lawrence—City of .....	95.72
Medical Services .....	143.00
Medicine .....	64.80
North Reading Sanatorium ....	1,005.74

New Bedford—City of .....	17.00
Newton—City of .....	151.90
North Andover—Town of.....	42.52
Provisions .....	290.67
Rent .....	7.48
Rutland State Sanatorium .....	994.13
St. John's Hospital.....	84.
Salem—City of.....	37.50
Southbridge—Town of.....	57.29
Sputum Cup Holders.....	4.80
Transportation .....	2.43
Tewksbury State Infirmary.....	355.00
Wages s.....	18.00
Westfield State Sanatorium.....	112.00
Smallpox Expenses .....	409.81\$5,451.65
Total Office Sundries.....	\$6,551.62

A grand total of \$7,682.70 (which included the Special Appropriation) was expended in 1912 for care of contagious diseases of which \$4,814.31 was expended for Tuberculosis alone.

## SPECIAL APPROPRIATION FOR CARE OF CONTAGIOUS DISEASES.

### LABOR.

Cleaning street and dumps.....	\$64.00
Wages paid during quarantine for scarlet fever .....	36.00
Quarantine Service .....	28.00
Matron at Contagious Hospital.....	24.00
Superintendent at Contagious Hospital.. ..	24.00
	\$176.00

## SUNDRIES.

Advertising .....	\$ 54.00
Boston—City of .....	117.43
Board and Nursing.....	63.00
Carriage Hire .....	25.00
Culture Talking .....	10.00
Children's Hospital, Boston.....	3.00
Chelmsford Street Hospital.....	92.14
Express .....	.95
Fuel .....	8.68
Fumigating Supplies .....	5.00
Haverhill—City of.....	86.00
Kitchen Utensils at Contagious Hospital....	15.66
Lowell Hospital .....	114.00
Lawrence—City of .....	30.00
Lakeville State Sanatorium.....	61.71
Medicine .....	12.90
Medical Service .....	176.00
North Reading State Sanatorium.....	624.00
North Andover—Town of.....	6.33
Printed Supplies .....	48.75
Provisions .....	89.90
Rent .....	14.28
Rutland State Sanatorium.....	251.32
St. John's Hospital.....	34.00
Tewksbury State Infirmary .....	109.00
Transportation of Tuberculosis patient.....	2.00
	<u>\$2,055.05</u>
Total .....	\$2,231.05

## MILK DEPARTMENT SUNDRIES.

Chemical Supplies .....	\$ 12.22
Express .....	4.95
Glass Apparatus .....	128.90
Laboratory Supplies .....	12.40
Legal Services .....	15.00
Printed Supplies .....	17.25
Stamps and Envelopes.....	36.85
Sundries .....	64.43
Telephone .....	38.22
	<hr/>
	\$330.22

## YARD SUNDRIES.

Blacksmiths' Supplies .....	\$ 425.82
Blacksmiths' Forge .....	67.35
Corn and Meal .....	281.39
Canvas Covers .....	30.
Cremator .....	204.
Coal .....	98.43
Electric Lights .....	18.85
Gas .....	55.93
Hardware .....	32.75
Ice .....	12.00
Insurance .....	25.00
Hay .....	3605.10
Fumigating Supplies .....	342.74
Lumber .....	54.32
Laundry .....	48.02
New Horses .....	700.00
New Wagon .....	25.00
Oats .....	3519.23
Printed Supplies .....	12.50
Rep'g Harnesses and Harness Supplies	238.58

Rep'g Carriages .....	100.30
Repairs .....	40.32
Sundries .....	174.99
Smallpox Hospital .....	13.89
Straw .....	143.06
Telephone .....	3.08
Use of Horses .....	425.00
Veterinary Services .....	23.75
Water .....	84.92
	<hr/>
	\$10,806.32

## INCOME TRANSFERRED TO GENERAL FUND 1912.

### HEALTH DEPARTMENT.

City of Boston.....	\$11.02
John Cutrumbes (Manure).....	51.25
Commonwealth of Massachusetts.....	292.56
Lawrence—City of .....	61.85
Maynard—Town of .....	10.40
Shedd, H. L.(Manure).....	60.00
Stow—Town of .....	24.00
Ware—Town of .....	32.00
Watertown—Town of .....	1.00
Penn. Fire Insurance Co.....	70.35
J. Spellacy (Sale of old iron).....	1.39
Swill Sold .....	5,678.27
Swill Licenses .....	460.00
Manicure Licenses .....	4.00
	<hr/>
	\$6,758.09

## MILK DEPARTMENT.

Milk Licenses .....\$273.50

Total to General Fund 1912	\$7,031.59	(This included Milk Dep't)
Total to General Fund 1911	6,762.36	( " " " " )
Total to General Fund 1910	6,770.56	( " " " " )
Total to General Fund 1909	6,763.73	
Total to General Fund 1908	6,418.50	
Total to General Fund 1907	6,808.20	
Total to General Fund 1906	4,566.66	
Total to General Fund 1905	3,727.41	
Total to General Fund 1904	4,137.31	
Total to General Fund 1903	4,085.12	
Total to General Fund 1902	6,103.87	
Total to General Fund 1901	4,585.26	
Total to General Fund 1900	3,647.03	



# SUMMARY 1912

	Appropriation from Revenue	Loans	Department Transfers	Additional Appropriations	Total Expenditures	Balances to 1913
<b>HEALTH OFFICE</b>						
Salaries of Board.....					\$ 1,500.00	
Salary of Dr. Smith.....					600.00	
Pay Rolls, Office.....					8,536.23	
					<hr/>	
	\$ 10,576.00			\$ 60.23	\$10,636.23	.73
Bills, Office.....	6,552.35				6,551.62	
Special Appropriation for care of Contagious Diseases		\$7,000.00			2,231.05	4,768.95
					<hr/>	
<b>YARD</b>						
Pay Rolls.....	39,324.59			1,249.72	40,574.31	
Bills.....	11,214.40				10,806.32	2,261.71
					<hr/>	
<b>MILK DEPARTMENT</b>						
Salaries.....	2,202.00			4.50	2,206.50	.44
Sundries.....	330.66				330.22	
					<hr/>	
<b>MEDICAL INSPECTION</b>						
Private Schools.....	800.00				800.00	
					<hr/>	
	\$71,000.00	\$7,000.00	\$1,853.63	\$1,314.45	\$74,136.25	\$7,031.83

**COST OF HEALTH DEPARTMENT 1912.**  
**EXPENDITURES.**

Salaries of Board....	\$1,500.00
Salary of Bacteriologist.....	600.00
Pay Rolls, Office .....	8,536.23
Pay Rolls, Yard ..	40,574.31
Bills, Office .....	6,551.62
Bills, Yard .....	10,806.32
Care of Contagious Diseases.....	2,231.05
Salaries Milk Dep't.....	2,206.50
Bills, Milk Dep't .....	330.22
Medical Inspection Private Schools	800.00
	<hr/>
	\$74,136.25

**APPROPRIATIONS.**

Office Salaries .....	\$10,576.00
Office Sundries .....	6,552.35
Yard Labor .....	39,324.59
Yard Sundries .....	11,214.40
Milk Dep't Salaries.....	2,202.00
Milk Dep't Sundries.....	330.66
Medical Inspection Private Schools	800.00
	<hr/>
	\$71,000.00
Transfers .....	\$ 1,853.63
Additional Appropriations .....	1,314.45
Loan .....	7,000.00
	<hr/>
	\$81,168.08
Balance to 1913 .....	7,031.83
	<hr/>
Total .....	\$74,136.25

FOLLOWING IS A SCHEDULE OF THE PROPERTY IN  
CONTROL OF THE BOARD OF HEALTH.

1.	Bay Horse "Peter"	23 years	\$ 15.00
2.	Black Horse "Torrent"	13 years	150.00
3.	Bay Horse "Lawrence"	12 years	200.00
4.	Bay Horse "Baldy"	24 years	50.00
5.	Mouseskin Horse "Patsy"	8 years	250.00
6.	Bay Horse "Duke"	26 years	20.00
7.	Gray Mare "Grace"	20 years	50.00
8.	Black Horse "Nigger"	21 years	25.00
9.	Gray Horse "Jerry"	11 years	250.00
10.	Gray Mare "Mollie"	23 years	40.00
11.	Bay Horse "Ned"	19 years	50.00
12.	Bay Horse "Moxie"	18 years	50.00
13.	Black Horse "Tom"	16 years	50.00
14.	Bay Horse "Frank"	17 years	50.00
15.	Roan Horse "Tom"	11 years	200.00
16.	Bay Mare "Grace"	15 years	100.00
17.	Gray Mare "Daisy"	13 years	175.00
18.	Black Horse "Joe"	13 years	125.00
19.	Gray Horse "Grover"	7 years	300.00
20.	Black Horse "Ned"	11 years	275.00
21.	Black Horse "Tom"	12 years	200.00
22.	Bay Mare "Peggy"	13 years	100.00
23.	Bay Horse "Jerry"	12 years	200.00
24.	Bay Mare "Jessie"	12 years	125.00
25.	Gray Horse "Harry"	12 years	275.00
26.	Gray Horse "Dick"	12 years	250.00
27.	Gray Horse "Sam"	12 years	100.00
28.	Gray Mare "Hattie"	8 years	325.00
29.	Bay Mare "Henrietta"	13 years	150.00
30.	Bay Mare "Nettie"	8 years	125.00
31.	Bay Mare "Beauty"	8 years	250.00
32.	Bay Mare "Sally"	7 years	250.00
33.	Bay Horse "Jim"	17 years	50.00
34.	Chestnut Horse "Rarus"	15 years	100.00
35.	Black Horse "Jim"	14 years	100.00
36.	Black Horse "Lawrence"	10 years	200.00
37.	Gray Horse "Dexter"	6 years	200.00
			<hr/> \$5,425.00

Five horses were shot during the year, and four new ones purchased.

## WAGONS AND SLEDS.

1 Traverse Runner Sleigh.....	\$ 65.00
1 Ambulance .....	175.00
1 Hospital Wagon.....	100.00
12 Double Ash Carts.....	1000.00
4 Single Ash Carts.....	150.00
12 Double Ash Sleds.....	900.00
4 Single Ash Sleds @\$50.....	200.00
11 Single Swill Sleds.....	600.00
15 Single Swill Wagons.....	800.00
2 Single Refuse Wagons @\$125.....	250.00
2 Coupes .....	425.00
2 Paper Wagons @100.....	200.00
2 Sleighs .....	80.00
2 Pungs @35.....	70.00
1 Concord Wagon .....	150.00
2 Moyer Buggies .....	200.00
2 Goddard Buggies.....	325.00
1 Covered Sleigh ....	20.00
3 Paper Sleds .....	250.00
1 Democrat Wagon.....	25.00
	<hr/>
	\$5,985.00

## HARNESSESS AND ROBES

2 Whips .....	\$ 1.00
1 Set Double Harness for Ambulance...	25.00
1 Set Single Harness for Ambulance...	25.00
16 Single Harnesses .....	200.00
15 Double Harnesses.....	187.50
40 Halters .....	10.75
1 Horse Cover .....	3.00
3 Woolen Robes .....	10.00
7 Baker Stable Blankets.....	

35 Tip-top Blankets.....	84.00
5 Street Blankets .....	15.00
1 Rubber Laprobe .....	2.00
4 Surcingles .....	1.00
35 Curry Combs and Brushes.....	35.00
12 Canvas Covers for Ash Carts.....	401.00
25 Mane Brushes.....	4.50
2 Under Harness Street Blankets.....	6.00
4 Large Canvases .....	8.00
2 Sponges .....	1.50
8 Collars .....	16.00
4 Collar Pads .....	5.00
3 Buffalo Robes .....	20.00
9 Harness Pads.....	1.00
8 Zinc Pads.....	1.00
1 Sheepskin .....	2.00
4 Set Reins .....	5.00
6 Shaft Lugs .....	2.00
2 Sets Hold-back Straps.....	1.00
10 Saddle Girths .....	4.00
33 Stall Straps .....	7.00
25 String Bells.....	12.50
7 Light Harnesses .....	60.00
34 Square Shovels.....	17.00
20 Swill Chisels.....	17.50
Horse Medicine .....	5.00
3 Fly Nets .....	.
3 Blankets for Contagious Coupe.....	3.00
4 Rakes .....	1.50
6 Dump Rakes .....	1.50
4 Boxes Harness Dressing.....	3.00

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\$844.25

## SUMMARY.

Horses .....	\$5,425.00
Wagons and Sleds.....	5,985.00
Harnesses and Robes.....	844.25
Miscellaneous .....	200.00
Carpenter Shop .....	300.00
Blacksmith Shop .....	350.00
Smallpox Hospital .....	500.00
	<hr/>
	\$13,604.25

Year	Popula- tion	Expenditures	Revenue	Net Cost	City's Valuation	Taxation per Capita
1894	83,026	\$a57,073.73	\$ 318.43	\$56,755.03	\$69,091,536	.63
1895	84,359	46,324.04	570.80	45,753.24	68,885,732	.54
1896	85,700	45,587.11	265.57	45,321.54	69,910,472	.53
1897	87,000	48,551.84	2,369.99	46,181.85	70,389,280	.53
1898	87,000	41,026.78	3,229.02	37,779.76	70,977,303	.43
1899	90,114	40,830.23	3,796.05	37,034.18	71,255,587	.41
1900	94,969	b46,266.11	3,647.03	42,619.00	71,529,515	.44
1901	94,969	46,673.41	4,585.26	42,088.15	71,674,588	.44
1902	95,574	c54,815.33	6,103.87	48,711.46	71,903,757	.48
1903	101,959	d46,168.01	4,085.12	42,682.89	72,004,028	.41
1904	104,402	e46,451.97	4,137.31	42,314.66	71,614,907	.40
1905	94,889	f51,707.39	3,727.41	47,979.98	71,645,718	.50
1906	96,380	54,096.00	4,566.66	49,529.34	74,325,775	.51
1907	96,380	57,763.79	6,808.20	50,955.59	76,079,750	.53
1908	96,380	g57,342.61	6,418.50	50,924.11	77,858,891	.53
1909	96,380	56,346.33	6,763.73	h49,582.60	79,176,837	.51
1910	106,294	h65,911.31	h6,770.56	h59,140.75	80,094,803	.56
1911	106,294	i73,425.97	i6,762.36	i66,663.61	82,166,743	.62
1912	106,294	j74,136.25	j7,031.59	j67,104.66	84,797,348	.63

a. Small-pox and Swill Cremation, \$12,708.25

b. Small-pox, \$4,739.67

c. Small-pox, 6,626.20

d. Small-pox, 1,000.00

e. Small-pox, 1,010.02

f. Small-pox, 3,297.08

g. Small-pox, 291.64

h. This includes expenditures and revenue of milk Dept.

i. " " " " " " " " "

j. " " " " " " " " " also Small-pox.



TABLE SHOWING RAINFALL IN INCHES BY MONTHS FOR THIRTY-FOUR YEARS, 1879-1912.

YEAR	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1879	2.475	3.762	5.013	4.030	2.279	5.709	4.379	6.176	2.176	1.434	3.364	4.465	45.262
1880	4.359	3.944	3.005	2.375	2.676	1.702	6.518	3.156	1.529	1.823	1.841	5.581	36.519
1881	5.538	3.151	7.210	1.855	4.274	4.900	2.496	1.731	2.750	1.962	4.282	4.253	44.182
1882	5.773	3.019	3.019	1.674	4.904	2.789	3.583	0.984	7.313	2.312	1.011	2.027	38.010
1883	2.923	3.405	5.793	4.110	3.684	2.036	3.198	0.909	1.487	5.292	1.720	2.623	32.418
1884	4.914	5.793	5.013	4.110	3.684	4.293	3.977	3.977	0.924	1.945	2.328	5.149	44.139
1885	4.856	4.095	1.022	3.666	3.589	4.293	6.026	6.098	1.581	4.841	5.183	2.811	48.001
1886	6.755	6.535	1.966	3.587	3.587	1.859	3.512	3.128	3.963	3.116	4.901	4.444	46.829
1887	5.720	5.182	4.738	3.046	1.644	5.425	5.425	10.931	2.228	3.270	3.270	5.379	53.145
1888	4.601	4.303	6.519	3.782	3.990	2.809	3.057	4.857	7.966	6.780	5.983	4.547	39.915
1889	5.037	1.710	1.938	3.830	3.890	2.592	6.102	3.979	3.286	4.268	6.929	3.366	46.756
1890	2.766	3.767	5.833	1.567	5.660	3.530	2.968	4.856	4.457	7.705	1.584	4.466	51.607
1891	7.041	3.840	5.933	3.563	2.289	3.659	2.321	1.966	1.806	2.926	1.913	3.204	41.131
1892	5.389	2.742	2.643	0.628	5.861	4.444	2.321	4.304	1.973	1.378	5.829	1.106	38.618
1893	2.392	7.703	2.439	2.946	4.300	2.414	2.686	0.925	2.280	3.823	1.983	5.260	42.945
1894	3.349	3.502	1.268	3.757	4.359	0.372	2.998	3.944	3.027	3.641	3.519	3.628	34.375
1895	3.306	1.747	6.510	4.569	2.782	2.631	2.786	2.017	2.280	2.995	8.165	3.172	41.332
1896	2.243	2.958	4.146	2.338	4.945	6.106	2.683	2.739	9.066	2.995	3.023	3.126	42.201
1897	4.551	4.647	1.652	5.201	3.053	3.649	4.619	2.930	3.033	0.392	6.467	5.320	50.439
1898	8.124	4.146	1.652	5.201	3.053	3.649	4.619	2.930	3.033	0.392	6.467	5.320	50.439
1899	3.690	7.950	6.566	2.156	2.100	2.710	2.416	2.111	3.663	1.846	2.744	3.683	54.289
1900	5.451	10.119	5.756	10.567	3.785	2.710	4.776	3.730	4.363	1.987	2.714	3.683	54.068
1901	1.720	1.056	5.281	5.475	2.366	2.107	3.563	5.159	6.290	3.267	2.792	6.204	51.110
1902	2.968	6.265	5.900	3.691	0.818	3.995	1.827	3.207	1.745	4.461	1.527	3.011	43.973
1903	3.386	3.957	5.900	9.316	2.983	3.985	1.827	3.207	5.512	4.461	1.527	3.011	43.973
1904	4.838	2.438	2.648	2.171	1.293	5.179	6.135	4.498	3.639	1.327	2.251	3.882	39.932
1905	6.958	1.705	3.708	3.002	5.999	4.802	6.135	3.473	1.432	3.382	3.085	4.218	45.517
1906	2.434	2.589	5.966	3.638	2.578	3.033	3.042	3.356	8.345	4.492	5.772	4.735	43.605
1907	2.770	2.390	2.149	3.638	4.185	0.926	3.042	4.288	0.926	2.566	1.140	3.034	32.352
1908	3.201	4.962	2.709	5.530	2.773	2.132	2.517	4.288	4.213	1.203	2.646	4.078	33.130
1909	4.166	5.787	0.477	5.530	2.773	2.132	2.517	4.288	4.213	1.203	2.646	4.078	33.130
1910	4.166	5.787	0.477	5.530	2.773	2.132	2.517	4.288	4.213	1.203	2.646	4.078	33.130
1911	2.883	3.872	0.744	1.937	0.810	4.369	1.930	2.207	2.038	1.182	3.567	3.324	36.316
1912	2.901	2.632	3.309	3.922	5.092	2.458	3.351	5.755	2.586	2.231	3.091	4.373	40.097

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# ANNUAL REPORT

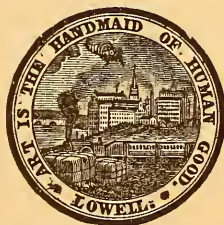
OF THE

## Superintendent of Streets

OF THE

### CITY OF LOWELL

FOR THE YEAR 1912



TABLES SHOWING IN DETAIL EXPENDITURES AND  
WORK DONE BY THE DIFFERENT DIVISIONS  
OF THE STREET DEPARTMENT

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BUCKLAND PRINTING COMPANY



72-74 MIDDLE STREET

LOWELL

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## REPORT

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*To the Municipal Council of the City of Lowell:*

Pursuant to the ordinances of the City of Lowell, the Commissioner of Streets and Highways submits the annual report for that department during the year 1912; the said report being compiled by me together with the Superintendent of Streets and Highways, which report is submitted herewith and outlines the work accomplished during said year.





# STREET AND SEWER DEPARTMENTS

ORGANIZATION 1912

---

## *Commissioner*

GEORGE H. BROWN

## *Superintendent of Streets*

NEWELL F. PUTNAM

## *Assistant Superintendent*

### *Streets*

GEORGE W. HARTWELL

## *Assistant Superintendent*

### *Sewers*

FRANK W. LAZELLE

## *Clerk*

CLINTON P. TUTTLE

## *Inspector of Sewers*

SAMUEL D. BUTTERWORTH

## *Clerks*

E. VERA MULLANEY

ANNA M. MULLANEY

## *Foreman*

### *Streets*

Blessington, John B.  
Bowers, John  
Clough, Charles H.  
Enwright, John F.  
Gardner, William G.  
Gilmore, William  
McHugh, James T.  
Nerney, John J.  
Sprague, Volney  
Hall, Irving I.

### *Sewers*

Gagne, Pierre  
Tague, Thomas F.  
Tighe, Owen  
Crowley, Thomas F.  
Smith, Thomas E.  
Thompson, Walter E.  
McCann, Patrick

## *Engineering Department*

### *City Engineer*

STEPHEN KEARNEY

## *Assistant, Streets*

HARRY R. SPRAGUE

## *Assistant, Sewers*

FREDERICK W. FARNHAM

## SUPERINTENDENT OF STREETS

TABLE SHOWING THE DIFFERENT SUPERINTENDENTS FROM  
THE YEAR OF INCORPORATION OF THE CITY OF LOWELL

1836	Alva Mansur
1837-1838	Chester A. Blodgett
1839-1852	Luther Eames
1843-1845	William A. Swan
1846-1849	Joseph Griffin
1850	Abiel Rolfe (to April 1)
1850-1857	William M. Smith (from April 1, 1850)
1858-1866	Wilder Bennett
1867-1872	Luther Richards
1873-1884	John C. Woodward
1885-1886	Charles H. Hanson
1887-1888	Edward Cawley
1889-1891	Horace P. Beals
1892-1895	Robert E. Crowley
1896	Cleveland J. Cheney (to Feb. 19, 1897)
1897	Charles Callahan (from Feb. 20 to March 9)
1897	George L. Fowler (from March 20)
1898-1900	Cleveland J. Cheney
1901	Patrick F. Brady
1902-1904	Laforest Beals (resigned May 24, 1904)
1904	Frederick W. Farnham (appointed May 25)
1905-1908	Charles J. Morse
1909-1912	Newell F. Putnam

# PAVEMENT STATISTICS ON STREETS AND BRIDGES

JANUARY 1, 1913

KIND	Sq. Yds. Laid in 1911-12	Total Yds. to Date	Miles Laid in 1911-12	Total Miles to Date
Asphalt .....		41,589.14		1 6590
Asphaltine .....		29,472.49		1.6600
Bitulithic.....		23,506.82		1.3100
Brick.....		3,976.90		0.1870
Hassam .....		9,831.53		0.4405
Granite Block, Hassam ....	40,574.27	85,562.15	1.8154	3.5709
Granite Block, Pitched on Base.....	3,120.03	3,120.03	0.1531	0.1531
Granite Block, Old Grouted on Base .....		833.90		0.0380
Granite Block, Old on Base.	4,508.72	10,210.62	0.3551	0.6955
Granite Block, Old.....		237,753.14		12.8630
Total Granite Block Pave- ment.....		337,479.84		17.3205
Tar Concrete.....		783.80		0.0547
Wood Block.....		5,112.10		0.2945
Macadam Plain.....	3,309.5	616,518.30	0.1743	36.4972
Macadam Oiled .....	31,944.3	50,855.3	2.0696	3.2048
Gravel Oiled .....		22,440.0		1.4167
Total Oiled .....		70,045.3		4.3848
Total Macadam .....		667,373.80		39.7020

TABLE OF APPROPRIATIONS (1912)

Name of Appropriations	Balances from 1911	Appropriation Revenue	Appropriation Loans	Department Receipts	Total Appropriation	Expended	Returned to Gen'l Treas. Fund	Balances to 1913
<b>STREETS—Regular</b>								
Salaries and Wages.....	.....	\$115,000 00	.....	\$ 125 19	\$115,125 19	\$115,121 69	\$ 3 50	.....
Other Expenses.....	.....	25,000 00	.....	1,216 09	26,216 09	26,216 09	.....	.....
<b>STREETS—Special</b>								
Maint. and Cleaning Streets	.....	.....	\$ 6,000 00	.....	6,000 00	5,971 80	28 20	.....
Macadamizing 1912.....	.....	.....	18,350 00	20 50	18,370 50	18,370 50	.....	.....
Paving 1912.....	.....	.....	72,750 00	86 47	72,836 47	72,836 47	.....	.....
Market St. Bridge 1912.....	.....	.....	6,500 00	.....	6,500 00	6,500 00	.....	.....
Stromquist Ave. Extension	\$2,649 49	.....	.....	.....	2,649 49	2,649 49	.....	.....
Shaw St Extension.....	989 84	.....	.....	.....	989 84	.....	.....	.....
Congress St Bridge.....	1,838 77	.....	.....	.....	1,838 77	296 15	.....	\$ 989 84
Macadamizing 1911.....	5,591 69	.....	.....	.....	5,591 69	5,591 69	.....	1,542 62
Paving 1911.....	8,227 66	.....	.....	15 47	8,243 13	8,243 13	.....	.....
Paving E. Merr'k St 1911	2,700 00	.....	.....	.....	2,700 00	2,700 00	.....	.....
Widening Lawrence Street..	404 14	.....	.....	.....	404 14	.....	.....	464 14
Repairing Bridges 1911.....	3,872 62	.....	.....	.....	3,872 62	3,872 62	.....	.....
<b>WATERING STREETS</b>								
Wages.....	.....	5,000 00	.....	.....	5,000 00	5,000 00	.....	.....
Other Expenses.....	.....	14,000 00	.....	.....	14,000 00	14,000 00	.....	.....
<b>SEWER MAINTENANCE</b>								
Salaries and Wages.....	.....	14,000 00	.....	.....	14,000 00	14,000 00	.....	.....
Other Expenses.....	.....	4,000 00	.....	.....	4,000 00	4,000 00	.....	.....
<b>Sewer Construction</b>	17,940 66	.....	50,000 00	257 53	68,198 19	68,198 19	.....	.....
<b>ENGINEERING</b>								
Salaries and Wages.....	.....	6,100 00	.....	7,412 38	13,512 38	13,512 38	27 85	.....
Other Expenses.....	.....	400 00	.....	.....	400 00	372 15	.....	.....
<b>Lighting.....</b>	.....	85,000 00	.....	.....	85,000 00	85,000 00	.....	.....

## STREET DEPARTMENT

## Salaries and Wages

Appropriation.....	\$ 115,000 00
Receipts.....	125 19
	<hr/>
	\$ 115,125 19

## Salaries :

Newell F. Putnam, Supt. . . . .	\$ 2,000 00
George W. Hartwell, Asst. Supt.	1,406 55
Clinton P. Tuttle, Clerk.....	693 82
Anna M. Mullaney, Clerk.....	372 00

## Wages :

Cleaning and Sparrow Work.....	43,028 40
Ledge . . . . .	9,070 42
Yard . . . . .	17,328 25
Grading.....	14,033 23
Snow . . . . .	9,052 52
Cinders . . . . .	8,264 82
Engineering.....	2,202 35
Concrete . . . . .	556 06
Miscellaneous . . . . .	7,113 27
	<hr/>
	115,121 69
	<hr/>
Balance . . . . .	\$ 3 50

## Other Expenses

Appropriation . . . . .	\$ 25,000 00
Receipts.....	1,216 09
	<hr/>
	\$ 26,216 09
General Maintenance. . . . .	\$ 9,022 53
Stable . . . . .	13,823 32
Engineering.....	89 61
Tools and Machinery.....	2,351 07
Office.....	929 56
	<hr/>
	26,216 09

## WATERING STREETS

### Wages

Appropriation .....	\$ 5,000 00
To Sundry Persons, (wages).....	5,000 00

### Other Expenses

Appropriation .....	14,000 00
Car Sprinklers and Power.....\$	10,341 62
Water.....	1,852 38
Miscellaneous.....	1,806 00
	<hr/> 14,000 00

## LIGHTING STREETS

Appropriation .....	85,000 00
Lowell Electric Light Corp. ....	50,637 74
Lowell Gas Light Co. ....	33,260 09
Sundry Persons, (wages) .....	1,102 17
	<hr/> 85,000 00

## SEWER MAINTENANCE

### Salaries and Wages

Appropriation .....	14,000 00
Salaries :	
F. W. Lazelle, Asst. Supt.....	1,321 22
C. P. Tuttle, Clerk .....	671 51
E. V. Mullaney, Clerk .....	835 15
S. D. Butterworth, Inspector.....	774 00
J. J. Mullaney, Inspector.....	57 00



## Wages :

To Sundry Persons.....	10,341 12	
	<hr/>	14,000 00

## Other Expenses

Appropriation .....		\$ 4,000 00
Yard .....	\$ 2,142 35	
Hardware, Casting, etc. ....	1,060 47	
Miscellaneous .....	797 18	
	<hr/>	4,000 00

## MAINTAINING AND CLEANING STREETS

Appropriation .....	6,000 00
To Sundry Persons (wages) .....	5,971 80
	<hr/>
Balance .....	28 20

## MACADAMIZING, 1912

Appropriation .....	\$ 18,350 00
Receipts .....	20 50
	<hr/>
	18,370 50
To Sundry Persons, (wages).....	\$ 14,227 50
Transfer, (Engineering) ....	80 20
Teaming .....	2,564 23
Oil .....	1,105 23
Coal .....	220 61
Miscellaneous .....	172 73
	<hr/>
	18,370 50

## PAVING, 1912

Appropriation .....		\$ 72,750 00
Receipts.....		86 47
		<hr/>
		72,836 47
Sundry Persons, (wages).....	49,211 84	
Transfers, (Engineering).....	964 37	
Teaming .....	5,991 72	
Paving.....	7,392 18	
Cement .....	3,250 96	
Coal .....	506 24	
Edgestone.....	1,041 45	
Water Works.....	1,689 83	
Concrete Supplies.....	823 80	
Miscellaneous ....	1,954 08	
	<hr/>	72,836 47

## MARKET ST. BRIDGE, 1912

Appropriation .....		6,500 00
Sundry Persons, (wages)....	3,749 56	
Cement .....	493 66	
Paving.....	757 20	
Lumber .....	736 23	
Hardware .....	219 23	
Water Works.....	187 02	
Teaming .....	160 52	
Miscellaneous.....	196 58	
	<hr/>	6,500 00

## STROMQUIST AVE. EXTENSION

Bal. from 1911.....	2,649 49
Sundry Persons, (wages).....	2,649 49

## SHAW ST. EXTENSION

Bal. from 1911.....	\$	989 84
Bal. to 1913.....		989 84

## CONGRESS ST. BRIDGE

Bal. from 1911.....		1,838 77
Sundry Persons, (wages) .....	50 76	
Transfer (Engineering).....	245 39	
		<hr/> 296 15
Balance to 1913.....		<hr/> 1,542 62

## MACADAMIZING, 1911

Bal. from 1911.....		5,591 69
Sundry Persons (wages) .....	4,513 68	
Teaming .....	1,010 11	
Miscellaneous .....	67 90	
		<hr/> 5,591 69

## PAVING, 1911

Bal. from 1911....		8,227 66
Receipts .....		15 47
		<hr/> 8,243 13
Sundry Persons (wages).....	6,306 96	
Transfer (Engineering) .....	229 38	
Teaming .....	1,585 72	
Advertising .....	63 90	
Miscellaneous .....	57 17	
		<hr/> 8,243 13

## PAVING EAST MERRIMACK, 1911

Bal. from 1911.....		2,700 00
Sundry persons (wages) ....	\$ 2,010 23	
Advertising .....	30 60	
Paving.....	200 92	
Teaming .....	458 25	
	<hr/>	2,700 00

## WIDENING LAWRENCE ST.

Bal. from 1911.....	\$	464 14
Bal. to 1913.....		464 14

## REPAIRING BRIDGES, 1911

Bal. from 1911.....		3,872 62
Sundry Persons, (wages) ..	3,009 24	
Transfer, (Engineering).....	89 25	
Advertising .....	39 30	
Hardware .....	478 44	
Teaming .....	92 50	
Lumber....	105 00	
Miscellaneous.....	58 89	
	<hr/>	3,872 62

## SEWER CONSTRUCTION

Bal. from 1911.....	\$	17,940 66	
Appropriation .....		50,000 00	
Receipts.....		257 53	
		<hr/>	
	\$	68,198 19	
Sundry Persons (wages) .....	\$	54,363 58	
Transfer (Engineering) .....		2,450 69	
Cement .....		1,069 16	
Coal .....		601 16	
Pipe .....		3,570 62	
Brick .....		769 54	
Castings .....		942 40	
Hardware .....		808 03	
Lumber .....		737 04	
Dynamite .....		440 62	
Claims .....		1,204 40	
Miscellaneous.....		1,240 95	
		<hr/>	
		68,198 19	

# STREETS LAID OUT AND ACCEPTED DURING THE YEAR

STREETS	LOCATION	WIDTH	LENGTH	PASSED
Agawam ...	Moore St. to St. James St.....	40	341 80	Dec. 3, 1912
Christian ...	Reservoir St. to Tenth St.....	50	1539 20	Nov. 30, "
Davenport Terrace East	End of previously accepted, portion to Florence Ave. ....	40	89 50	Dec. 3, "
Fleming ....	Stevens St. to Newbury St.....	40	354 30	Oct. 8, "
Gilbride Terrace	Middlesex St. to land of Ellen Shea .....	25	195.00	Aug. 20, "
Glenwood ..	Wentworth Avenue to Butman Road .....	45	461.80	Dec. 3, "
Newbury ..	Fairfax St. to Fleming St.....	40	228.00	Oct. 8, "
Rutland ....	Westford St. to Princeton St .....	40	521.30	Nov. 20, "
Sprague Av.	Boylston St. to City Line	42	1504.50	Dec. 3, "
Troy .....	Stevens St. to Harvard St.....	40	463.60	Nov. 20, "
Weed .....	End of accepted portion to Stromquist Av.	35	508.60	Aug. 20, "
Total Length			6207 60 ft. = 1.18 miles	

Number of miles of accepted streets Jan. 1, 1912.....	139.79
" " " " streets accepted in " .....	1.18
" " " " accepted streets Jan. 1, 1913.....	140.97
" " " " unaccepted streets about .....	60.00

The resolution passed Oct. 3, 1911, changing the name of Merrill Ave. to Munroe St. was rescinded by action of Municipal Council May 11, 1912, giving the street its former name of Merrill Ave.

A footway, known as Oaklands Path, extending from Parkview Ave. to Holyrood Ave., 325.20 feet in length and 5 feet in width was laid out and accepted by Order adopted by Municipal Council Dec. 13, 1912.

The construction of a Reinforced Concrete bridge on Market Street over the Merrimack Canal which replaces old bridge as ordered by Order adopted July 25, 1911, was completed in 1912.

The construction of a Reinforced Concrete bridge on Cambridge St. over Hale's Brook which replaces old bridge, as ordered by Order adopted July 25, 1911, was completed in 1912.

The work in conjunction with the changing of the grade of Knapp Ave. as re-established by Resolution passed Sept. 5, 1911, was partially completed in 1912.



## SIDEWALKS ACCEPTED DURING THE YEAR

STREETS	LOCATION	KIND	PASSED
Aberdeen..	W. S. Methuen St. S'l'y, 108 ft. in front of premises, No. 116, No. 118 .....	Edge & Conc.	Nov. 26, 1912
Billings ...	S. S. from W'l'y line of Billings St. School lot W'l'y 77.5 ft. in front of premises No. 124.	Granolithic	Apr. 23, "
Chelmsford..	E. S. Grand St. N'l'y 261 ft. ...	Concrete	Aug. 20, "
Colburn...	W. S. Merrimack St. N'l'y 71.1 abutting premises of A. B. Beal .....	Granolithic	May 28, "
Crawford ..	N. S. from W'l'y. line of Gershom Ave. W'l'y 100 ft. in front of premises No. 7 and No. 9 .....	Concrete	April 23, "
Crawford ..	N. S. from a point 100 ft. W of W'l'y, line of Gershom Ave W'l'y 50 ft. in front of premises No 15 .....	Concrete	April 23, "
Crawford ..	S. S. in front of premises Nos. 52-56-58-60 a distance of 120 feet .....	Concrete	Dec. 3, "
Endicott ..	S. S. in front of premises No. 8 a distance of forty (40) feet ..	Concrete	Dec. 3, "
Gibson ...	W. S. in front of premises Nos 233 and 235 a distance of 50 feet .....	Concrete	Dec. 3, "
Gershom Ave..	E. S. from a point 85' N. of N'l'y line of Mt. Hope St. N'l'y 89 feet in front premises Nos. 9-11-15-17.....	Concrete	April 23, "
Gershom Ave..	W. S. from N'l'y line of Crawford St. N'l'y 45 feet in front of premises No. 42 and No. 44	Concrete	April 23, "
Grace.....	W. S. in front of premises Nos. 25-27 a distance of 50 feet....	Concrete	Dec. 13, "
Grand ....	E. S. from Chelmsford St. southerly 148 feet.....	Concrete	Aug. 20, "
Kinsman ..	W. S. from a point 46' S. of S'l'y line of Crosby St. S'l'y 36.6 feet in front of premises No. 67.....	Concrete	April 23, "

# SIDEWALKS ACCEPTED DURING THE YEAR—Continued

STREETS	LOCATION	KIND	PASSED
Merrimack	N. S. Colburn St. to Tilden St. abutting premises of A. B. Beal .....	Granolithic	May 28, 1912
Methuen ..	S. S. Aberdeen St. W'y 45 feet in front of premises Nos. 241- 243 .....	Edge & Conc.	Nov. 26, "
Moody ...	W. S. in front of premises No. 572 .....	Concrete	Dec. 3, "
Pawtucket.	N. S. in front of premises No. 85, Nos. 87-93.....	Concrete	Dec. 3, "
Perry .....	W. S. from S'y line of land of L. E. L. Corp. S'y 106-8 ft. in front of premises of the American Mason Safety Thread Co.....	Edge & Cin.	May 28, "
Sanders Ave..	Ave. E. S. from a point 200 ft. S. of S'y line of Davenport Terrace, East S'y 60 feet in front of premises No. 24... .	Concrete	Dec. 3, "
Tilden ....	E. S. Merrimack St. N'y abut- ting premises of A. B. Beal..	Granolithic	May 28, "
White ....	W. S. Endicott St. S'y 124 ft. in front of premises No. 220.	Concrete	Dec. 13, "

## CONSTRUCTION WORK

## SIDEWALKS BUILT AS ORDERED BY THE MUNICIPAL COUNCIL

STREETS	LOCATION	Lin. ft. Curved	Lin. ft. Straight	Width	DATE
Floyd.....	S. S. Central St. to Kins- man St.....	9.2	538.1	4.5	Sept. 1912
Pawtucket.	N. S. from E'y line of J. H. Roy E'y 180 ft....		180.6	7	Oct. 9, "
Sanders Av	E. E. from a point 200 ft. S. of S'y line of Dav- enport Terrace, East S'y 60 ft. ....		60.0	6	Oct. 5, "
Fremont...	E. S. Third St. to Sixth St. (partially completed)		46.0	10	Oct. 7, "
Pine .....	S. S. 148 ft. W'y of W. Line Hastings St. W'y 1540 feet .....		153.2	6	Aug. 2, "

## GRANOLITHIC SIDEWALKS BUILT IN 1912

STREETS	LOCATION	SQ. YDS	BY WHOM DONE
Appleton	N. S. Elliott St. E'ly ...	100.02	City
Central	W. S. front of Bradley Blk, ( $\frac{1}{2}$ of amount paid by city).....	450 02	Contract
Central	W. S. Jackson St. N'ly front of Hamilton Mfg. Co. ( $\frac{1}{2}$ of amount paid by city)....	149 52	"
Dutton	W. S. front of Nos. 243- 247 ( $\frac{1}{2}$ of amount paid by city).....	32.52	"
Dutton	W. S. front of No. 269 ( $\frac{1}{2}$ of amount paid by city)	26.71	"
Elliott	E S. Appleton St. to P. O. Ave. ....	87.14	City
Gorham	W. S. front of St. Peter's Church property, re- places brick (R. P. 1912)	175 5b	Contract
Market	N. S. at E. S. Dutton (Reg. Market St. bridge 1912)	6.70	City
Market	N S. at Canal bridge (Reg. Market St. bridge 1912)	75.21	"
Market	S S, at Canal bridge (Reg. Market St. bridge 1912)	78.33	"
Market	S. S. at E. S. Dutton St. (Reg. Market St. bridge 1912).....	11 20	"
Merrim'ck	S. S. at Nos. 636-638, Re- places brick.....	57.47	Contract
Paige	N. S. at High School Annex .....	48 22	City
	Total.....	1298 61	

# GRANITE BLOCK PAVEMENT LAID DURING YEAR

STREET	LOCATION	LIN. FT.	SQ. YDS.	FILLER
Aiken ....	Cheever St. to Hall St. including Hall St. Jct..	549.60	2215 30	Cement
Church and Andover..	Central to W. L. Fayette and Concord Sts .	1690.10	5584.63	"
Dutton .....	E. S. at Market St.....	41.00	150.70	"
East Merrimack.....	S. S. between Howe and Fayette Sts. ....	198.00	342.09	"
East Merrimack.....	Between Fayette and E. L. High St.....	335 50	1234.08	"
Gorham ....	West Union St. to Elm St. ....	751.00	2794.06	"
Market.....	At E. S. Dutton St. ....		98 78	"
Market. ....	At Western Canal on bridge.....	43.50	198.17	Pitch
Middlesex ..	S. S. Paw't St. to Baldwin St.....	1875 70	2192.62	Sand
Pawtucket..	Merrimack St. to School St.....	1555.00	7607.99	Cement
Total .....		7039.40	22418.42	
		= 1.3332 Miles		

## STREETS MACADEMIZED IN 1912

STREETS	LOCATION	LENGTH	SQ. YDS.
Cabot ....	Northern Canal to Hall St....	506.0	1971.5
Fort Hill Ave....	Porter St. to Rogers St.....	684.0	1950 0
Fremont .	Third St. to Sixth St . . . . .	612 8	1870.0
Gershom Ave....	Moody St. to Crawford St.....	207.0	598.0
Moody. . .	S. S. Fifth Ave. to beyond Sixth Ave. . . . .	450.0	710.0
Merrill Ave....	Eleventh St. N'ly . . . . .	166.0	479.6
Pine.. . . .	Wilder St. to Stevens St.....	842.5	2221.9
Porter....	High St. to Nesmith St.....	778.0	1594.0
Summit ..	Fairmount St. to Belmont Ave.	400.0	1089.0
		<u>5046.3</u>	<u>13595.0</u>

## STREETS MACADAMIZED AND OILED IN 1912

Stackploe.	E. Merrimack St. to Brown St.	444.9	1438.0
Suffolk...	Moody St. to Merrimack St...	179.3	538.0
Pine.....	Westford St. to Warwick St...	613.4	1685.6
		<u>1237.6</u>	<u>3661.6</u>



## MACADAMIZED STREETS RE-SURFACED IN 1912

STREETS	LOCATION	LIN. FT.	SQ. YDS.
Cheever..	Aiken St. E'ly .....	86.0	316.3
First .....	Read St. to Simpson St.....	911.0	1825 3
High.....	Andover St. to Porter St.....	1138.0	3414.0
Hildreth ..	Ennell St. to Ludlam St.. ...	512.0	1256.0
Liberty...	Pine St. to Warwick St. ....	145.0	319.7
Moody ...	Pawtucket St. E'ly.....	472.0	1550 0
Moody ...	S. S. Bridge to Fifth Ave.....	2365.9	3600.0
Nesmith..	E. Merrimack St. to Rogers St.	3350.0	6700.0
North ....	Central St. to Lawrence St....	569.0	1125.0
Osgood ..	Westford St. to Liberty St....	580 0	1290 0
Pine .....	Wilder St. to Liberty St.....	120.0	433.5
Rogers...	Hanks St E'ly.....	1294.0	4026.0
Rolfe.....	Broadway N'ly.....	687 6	1824 0
Swift ....	Lawrence St to Whipple St...	446.5	923 0
Thorndike	Summer St. to Madison St....	1462 0	5650.0
		14139.0	34252 8



# MACADAMIZED STREETS RE-SURFACED AND OILED IN 1912

STREETS	LOCATION	LIN. FT.	SQ. YDS.
Andover.	Concord St. to Nesmith St....	1064.0	4645.0
Andover	Nesmith St. to Park St.....	180 0	600.0
Belmont Ave....	Mansur St. to Summit St. ....	1100.0	3300.0
Fairmount	Mansur St. to Talbot St .....	350.0	1050.0
Fairview	Fairmount St. E'ly.....	900.0	2200.0
Mansur...	Nesmith St. to Belmont Ave..	1325.0	2650.0
Nichols ..	Branch St to Westford St.....	580.0	1418.0
Park . ...	E. Merrimack to Andover St..	594 0	1848.0
Suffolk...	Moody St. to Canal Bridge....	325.0	934 0
Talbot ...	Fairmount St. to Belmont Ave.	630.0	1820.0
		<u>7048.0</u>	<u>20465.0</u>
		= 1.3348 Miles	

## OILED ROADWAYS

STREETS	LOCATION	DATE	LIN. FT.	SQ. YDS.
Andover .....	Concord St. to Nesmith St. ....	1912	1064	4645
	Nesmith St. to Park St.	1912	180	600
	Mansur St. to Summit St. ....	1912	1100	3300
Belmont Ave.....	Common Ave. W'ly.....	1910		84.9
Clark .....	Salem St. to Common St.	1910	287	2672
Common Ave. ....	Common Ave. to Cross St. ....	1910	845.4	2263.6
Common St.....	Aiken Ave. to Hildreth St. ....	1911	1280.4	2522 3
Lilley Ave .....	Nesmith St. to Belmont Ave. ....	1912	1325	2650
Mansur .....	N. S. Bridge to Riverside St. ....	1911	872	1653.2
Moody .....	Branch St. to Westford St. ....	1912	580	1418
Nichols .....	E. Merrimack St. to Andover St. ....	1912	594	1848
Park .....	Dunbar Ave. to State Highway .....	1909	7480	22440
Pawtucket Boulevard .....	Westford St. to Warwick St. ....	1912	613.4	1685.6
Pine .....	Moody St. to Bodwell Ave. ....	1911	1250	4713.9
Riverside.....	Westford St to Liberty St. ....	1910	1281.2	4027.5
Smith .....	Pine St. to Parker St. ..	1910	1750	5195
Stevens .....	Merrimack St. to Moody St. ....	1912	179.3	538
Suffolk .....	Moody St. to Northern Canal .....	1912	325	934
Talbot .....	Fairmount St. to Belmont Av.....	1912	630	1820
Washington .....	E. Merrimack St. to Brown St.....	1912	444.9	1438
Stackpole .....	Mansur St. to Talbot St.	1912	350	1050
Fairmount.....	Fairmount St. E'ly.....	1912	900	2200
Fairview .....			24,406.1	72'295 3

Total, 4,621.5 miles

# STREETS GRADED AND RE-SURFACED WITH GRAVEL

STREETS	LOCATION	LIN. FT.	SQ. YDS.
Atlantic ..	Wedge St. S'ly ....	190.0	507.0
Astor. ....	Fort Hill Ave. to Hanks St....	295.0	720.0
Baldwin..	Middlesex St. S'ly.....	650.0	1896.1
Boulevard	Varnum Ave. to Dunbar Ave..	2150.0	7167.0
Bourne...	Moore St. to Otis St.....	420.0	1300.0
Broadway	Rolfe St. to Pawtucket St....	950.0	1271.0
D.....	Stevens St. to E. S. of Oval...	555.0	2800.0
Fairfax ..	Stevens St. W'ly.....	495.0	1375.0
Fairfield..	Wedge St. S'ly .....	290.0	773.0
Florence..	Westford St. to Davenport Terrace E. ....	332.0	812.0
Foster ...	Middlesex St. N'ly.....	219.3	750.5
HarrisAve	Shaw St. to B St.....	782.0	1912.0
Highland Ave....	Parker St. N'ly.....	150.0	450.0
Highland Ave....	Wedge St. to Fairfax St....	330.0	1027.0
Howard ..	Hale St. N'ly.....	420.0	1000 0
Inland....	Chelmsford St. to Lang St...	1158 0	3602.7
Livingston Ave....	Middlesex St. S'ly.....	650.0	2600.0
Lura .....	Wedge St. N'ly .....	210.0	560.0
Otis.....	Andrews St. to Bourne St....	200.0	620.0
Rolfe,....	Pawtucket St. S'ly.....	379.5	773.7
Ruth. ...	Wedge St. N'ly... ..	225.0	700.0
School ...	Middlesex St. to Spring Ave..	220.0	660.0

# STREETS GRADED AND RE-SURFACED WITH GRAVEL—Continued

STREETS	LOCATION	LIN. FT.	SQ. YDS.
Stromquist Ave....	Lunberg St. S'ly. ....	658.0	2047.1
Tanner...	Plain St. N'ly. ....	460.0	1687.0
Wedge ...	Highland Ave. W'ly.. ....	650.0	2022.0
Weed ...	Stromquist Ave. W'ly.....	508.6	1356.0
W. Fifth Ave....	Courtland St. W'ly.....	280.0	750.0
		<u>13827 4</u>	<u>41139.1</u>

Personal Property in charge of Commissioner of  
Streets and Highways

## Streets :

Store Room .....	\$ 4,070
Yard .....	14,340
Shop .....	2,000
Stone .....	6,780
Blacksmith Shop .....	890
Tool House .....	568
Dracut Ledge .....	14,700
Horses and Harnesses .....	21,788
Miscellaneous .....	2,200

## Watering Streets :

Carts, etc .....	12,635
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## Sewer :

Office .....	725
Miscellaneous .....	19,850

Lighting Streets .....	10,025
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## Engineer :

Furniture, etc., in office .....	2,560
Tools and Material .....	2,900

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\$ 116,031

# BRIDGE STATISTICS

STREET	LOCATION	MATERIAL	ROADWAY			PAVEMENT	MAINTAINED BY
			LENGTH	WIDTH	SQ. YDS.		
Aiken .....	Merrimack River .....	Iron .....	775.4	30.6	2636.4	Wood Block	City
" .....	Northern Canal .....	" .....	107.6	31.7	379	" "	"
Boylston .....	Western Div. B. & M. R. R. ....	Wood ...	34.5	21	80.5	Plank	B. & M. R. R.
" .....	Lowell and Lawrence R. R. ....	" .....	29	31	99.9	"	B. & M. R. R.
Bridge .....	Merrimack River .....	Iron .....	474.1	32.9	1733.1	Wood Block	City
" .....	Eastern Canal .....	Wood & Iron ...	45.6	16.4 16.2	83.1 82.1	Tar Concrete Wood Block	Props. Locks & Canals
Broadway .....	Pawtucket Canal .....	Wood ...	73.7	35.3	289.1	Plank	City
" .....	Western Canal .....	Stone .....	.....	35	.....	Macadam	"
Cabot . ....	Northern Canal .....	Wood .....	106.3	26.1	308.3	Plank	"
Cambridge .....	River Meadow Brook ..	Concrete .	30	28.1	93.7	Dirt	"
Central .....	Pawtucket Canal ....	Wood .....	90.3	20.5 17.4	205.7 174.6	Tar Concrete Wood Block	Props. Locks & Canals
Chelmsford .....	B. & M. R. R. ....	Iron .....	134.6	36	538.4	Plank	B. & M. R. R.
Church .....	Concord River .....	Stone .....	.....	.....	.....	Grout'd Granite	City
Congress .....	River Meadow Brook ..	Concrete	37	20	82.2	Macadam	"
Dutton .....	Western Canal .....	Wood .....	38.4	42.7	182.2	Plank	"



# BRIDGE STATISTICS—Continued

STREET	LOCATION	MATERIAL	ROADWAY			PAVEMENT	MAINTAINED BY
			LENGTH	WIDTH	SQ. YDS.		
East Merrimack ..	Eastern Canal.....	Iron .....	61.7	25	171.4	Tar Concrete	Props. Locks & Canals
				15.6	106.9	Wood Block	
Gorham .....	Concord River .....	Iron &	128.3	40	570.2	Pitched Block	City
Hale .....	River Meadow Brook ..	Stone....		33.6		Granite Block	"
Howard .....	B. & M. R. R. ....	Stone ....	160.8	25	446.7	Plank	B. & M. R. R.
Jefferson .....	River Meadow Brook	Stone ...	52	28	161.8	Granite Block	City
Lawrence .....	Western Canal.....	Iron .....	50.5	25.7	144.2	Plank	"
" .....	Concord River.....	Wood....	201.5	27	604.5	"	"
	Wamesit Canal .....	Wood....	33	27.6	101.2	"	Wamesit Power Co.
Lincoln .....	River Meadow Brook..	Concrete	36	36	144	Dirt	City
" .....	" .....	Wood....	52.5	36	210	Plank	"
" .....	N: Y. N. H & H. R. R.	Iron ....	78.5	30.5	266	"	N. Y. N. H. R. R.
Lundberg .....	Quebec Street .....	" .....	60.6	30.5	205.4	Pitched Block	City
Market.....	B. & M. R. R. ....	" .....	119.8	23.1	307.5	Plank	"
	Merrimack Canal .....	Concrete	43.5	41.0	198.17	Pitched Block	"
	Western Canal.....	Wood....	43	43.1	205.9	Plank	"
Merrimack .....		Stone &					
	Merrimack Canal .....	Brick ..	34.5	40.8		Grouted Block	Props. Locks & canals
	Western Canal.....	Wood....		45.2	173.3	Plank	" " "



# BRIDGE STATISTICS—Continued

STREET	LOCATION	MATERIAL	ROADWAY			PAVEMENT	MAINTAINED BY
			LENGTH	WIDTH	SQ. YDS.		
Moody .....	Western Canal.....	Wood.....	37.5	34.5	143.7	Plank	City
Newhall.....	Merrimack River.....	Iron .....	495	36	1980	Brick	"
Pawtucket.....	River Meadow Brook ..	" .....	33.7	23	86.1	Plank	"
	Northern Canal .....	Wood.....	163.7	21 6	392.9	"	Props. Locks & Canals
	Pawtucket Canal .....	" .....	91	32	323.6	Tar Concrete	" " "
	B. & M. R. R.....	Iron .....	76.5	31.5	267.7	Plank	B. & M. R. R.
Plain.....	River Meadow Brook..	Wood...	52.4	28	163	"	City
	N. Y. N. H. & H. R. R.	Iron , .....	74.2	30 5	251.5	"	N. Y. N. H. & H. R. R.
Rogers .....	Concord River.....	Stone .....	222.5	27.3	674 9	Macadam	City
School .....	Merrimack River .....	Iron .....	315	23	805.0	Plank	"
		Brick &					
	Northern Canal .....	Stone..					
	B. & M. R. R. ....	Iron .....	66.5	29 25	216.1	Pitched Block	Props. Locks & Canals
Suffolk .....	Northern Canal.....	Wood....	105	30.5	355.8	Plank	B. & M. R. R.
Thorndike .....	Pawtucket Canal.....	" .....	156 4	32.6	566.5	"	Props. Locks & Canals
Walker.....	B. & M. R. R. ....	Iron .....	60	23	153.3	Brick	" " "
		Wood &					B. & M. R. R.
Wilder.....	" " " .....	Iron ...	36 3	28	112.9	Plank	" "
	Lowell and Lawrence	Wood &				"	ity
Woburn.....	R. R. ....	Iron.....	35.3	24	94.1	"	"
Worthern .....	Western Canal.....	Wood.....	38 7	30.1	129.4	"	"

# CATCH BASINS BUILT, 1912

STREETS			LOCATION
Belmont Ave . . . . .	New . . . . .	West side . .	5. ft. south of south line Mansur Street on south line Talbot Street
Belmont Ave. . .	New . . . . .	West side . .	
Belmont Ave . . . . .	New . . . . .	East side . .	29. ft. north of south line Talbot Street
Birch . . . . .	New . . . . .	East side . .	49.7 ft. north of north line Fairmount Street
Cabot . . . . .	New . . . . .	East side . .	150.3 ft. north of north line Cheever Street
Cabot . . . . .	New . . . . .	West side . .	146.3 ft. north of north line Cheever Street on south line Boisvert Street
Carolyn . . . . .	New . . . . .	East side . .	7. ft. north of north line Boisvert Street
Carolyn . . . . .	New . . . . .	East side . .	13. ft. north of north line Boisvert Street
Carolyn . . . . .	New . . . . .	West side . .	4. ft. south of south line Shaw Street
Chauncey . . . . .	New . . . . .	East side . .	36.5 ft. south of south line D Street on east line Warren Court
Chauncey . . . . .	New . . . . .	West side . .	
Church . . . . .	New . . . . .	South side . .	11.4 ft. east of east line George Street
Church . . . . .	New . . . . .	North side . .	2. ft. east of east line George Street
Church . . . . .	New . . . . .	South side . .	9. ft. west of west line Lawrence Street
Church . . . . .	Rebuilt . . . . .	North side . .	3. ft. west of west line Lawrence Street
Church . . . . .	Rebuilt . . . . .	South side . .	7.6 ft. east of west line Lawrence Street
Church . . . . .	New Track . . . . .	Cen. of Tr . .	
Court . . . . .	New . . . . .	East side . .	2. ft. south of south line Monchester Street
D . . . . .	New . . . . .	North side . .	5. ft. west of west line Wilder Street

## CATCH BASINS BUILT, 1912—Continued

STREETS			LOCATION
Dodge .....	New.....	East side ...	9. ft. north of north line Suffolk Street
Dodge .....	New.....	West side...	7.5 ft. north of north line Suffolk Street
Dutton .....	New.....	North side ..	36. ft. east of east line Parker's Bobbin Shop
East Merrimack..	New.....	North side ..	5. ft. east of east line Fayette Street
East Merrimack..	New.....	South side ..	4. ft. east of east line Fayette Street
East Merrimack..	New.....	North side	3.5 ft. east of east line High Street
East Merrimack..	New Track ..		2. ft. north of north line High Street
East Merrimack..	New Track ..		2. ft. north of north line High Street
Fairmount. ....	New.....	North side...	3. ft. west of east line Summit Street
Fairmount.....	New.....	South side...	on east line Birch Street
Fairmount.....	New.....	North side...	16. ft. east of div. line west of No. 279 Fairmount
Fairmount.....	New.....	South side...	6. ft. west of div. line west of No. 279 Fairmount
Fay .....	New.....	South side ..	145.8 ft. west of west line O'Connell Street
Fred .....	New.....	East side ...	7. ft. north of south line Lupine Road
Fred .....	New.....	West side...	5. ft. south of south line Lupine Road
Gorham .....	New.....	West side...	9. ft. north of north line Lincoln Street
Gorham .....	New Track ..		157.5 ft. south of south line Union Street
Gorham .....	New.....	West side...	10. ft. south of south line Bowden Street
Gorham .....	New.....	West side...	9. ft. north of north line Lincoln Street

# CATCH BASINS BUILT, 1912—Continued

STREETS			LOCATION
Hall .....	New.....	North side ..	3. ft. east of east line Aiken Street
Harris Ave.....	New.....	East side ..	6. ft. south of south line Shaw Street
Harris Ave.....	New.....	West side....	6. ft. south of south line Shaw Street
Lakeview Ave ..	New .....	South side ..	72.5 ft. west of west line Campaw Street
Lawrence .....	New.....	North side ..	on east line Moore Street
Lawrence .....	New.....	South side ..	8.5 ft. east of east line Moore Street
Manchester .....	New.....	South side ..	17. ft. east of east line No. 80 Manchester Street
Maple .....	New.....	North side ..	7.5 ft. west of west line Gorham Street
Middlesex .....	New.....	South side ..	49. ft. east of east line Duren Ave.
Middlesex .....	New.....	South side ..	206. ft. west of west line Duren Ave.
Middlesex .....	New.....	South side ..	165. ft. east of east line Webber Street
Middlesex .....	New.....	South side ..	3. ft. west of west line Webber Street
Middlesex .....	New.....	South side ..	7. ft. east of west line Middlesex Park
Middlesex .....	New.....	South side ..	11.5 ft. west of west line School Street
Middlesex .....	New.....	South side ..	88. ft. west of west line No. 1960 Middlesex Street
Middlesex .....	New.....	South side ..	242.5 ft. east of east line Duren Ave.
Pawtucket .....	New.....	South side ..	13.5 ft. west of west line Props. Locks & Canals' land
Pawtucket .....	New.....	North side ..	7.5 ft. east of west line Props. Locks & Canals' land
Pawtucket .....	New.....	South side ..	7.5 ft. east of west line Props. Locks & Canals' land
Pawtucket .....	Rebuilt....	North side ..	113. ft. east of east line Mt. Washington Street

## CATCH BASINS BUILT, 1912—Continued

STREETS			LOCATION
Pawtucket .....	Rebuilt .....	South side ..	98. ft. east of east line Mt. Washington Street
Pawtucket .....	Rebuilt .....	South side ..	4. ft. west of west line Mt. Washington Street
Pawtucket .....	Rebuilt .....	North side ..	11.7 ft. east of west line Mt. Washington Street
Pawtucket .....	Rebuilt .....	North side ..	41.5 ft. east of east line Mt. Vernon Street
Pawtucket .....	Rebuilt ..	South side ..	7. ft. west of west line Mt. Vernon Street
Pawtucket .....	New Track..	Centre .....	105. ft. east of east line Mt. Washington Street
Pawtucket .....	New Track..	Centre .....	105. ft. east of east line Mt. Washington Street
Pawtucket .....	New Track..	Centre .....	opposite Arlington Street
Pawtucket .....	Rebuilt .....	South side ..	9. ft. west of west line Arlington Street
Pawtucket .....	Rebuilt .....	North side ..	17.6 ft. west of west line Arlington Street
Pine .....	New .....	North side ..	7.5 ft. west of west line Wilder Street
Porter .....	New .....	South side ..	b. ft. east of east line Fort Hill Ave.
Sarah Ave .....	New .....	North side ..	1. ft. west of west line Riverside Street
Stackpole .....	New .....	North side ..	6. ft. east of angle next East Merrimack Street
Stackpole .....	New .....	South side ..	14. ft. east of angle next East Merrimack Street
Stackpole .....	New .....	South side ..	7. ft. west of angle next Brown Street
Stackpole .....	New .....	North side ..	on west line Brown Street
Stackpole .....	New .....		at northeast intersection of Brown and Stack-
Suffolk .....	New .....	South side ..	11.5 ft. east of east line Dodge St. [pole Streets



# CATCH BASINS BUILT, 1912—Continued

STREETS		LOCATION
Third .....	New....	9.5 ft. west of west line Llewellyn Street
Third ..	New....	6.6 ft. west of west line Llewellyn Street
Wedge .....	New.....	at northwest intersection Highland Ave.
West Fifth Ave..	New.....	5. ft. west of west line Courtland Street
West Fifth Ave..	New .....	2. ft. west of west line Courtland Street
West Fourth .....	Rebuilt.....	25. ft. east of east line Jewett Street
Wilder .....	New.....	14. ft. south of south line D Streets
Wilder .....	New.....	at intersection of D and Wilder Streets
Woodbury .....	New.....	5. ft. east of east line School Street
5 Back Water Traps put in by City in 1912.		
Catch Basins built by City in 1912 .....	85	
Catch Basins rebuilt by City in 1912 .....	11	
	<hr/>	
Catch Basins discontinued.....	74	
	7	
	<hr/>	
Catch Basins previously built.....	67	
Total number Catch Basins Jan. 1, 1913...	3649	
	—	3716





# AIKEN STREET

A

Linear Feet	Square Yards	Cost per Square Yard	Total Cost Exclusive of Regulation	Labor, Material, Etc.	Sub-Grade	Found-ation	Paving	Grouting	Regulation	Totals	Cost per Square Yard
549.6	2215.3	\$1.32025	\$2,924 76	Labor, Teaming.....	\$312 54						
				Use of tools .....	20 61					\$333 15	\$1.15088
				105 tons crushed stones.....		\$115 50					
				Hauling " .....		35 75					
				33 bags cement.....		9 32					
				132 " sand .....		1 32					
				Water .....		3 00					
				Labor .....		41 53				204 42	.00228
				2210.3 square yds. recut paving, or							
				49,422 blocks @ \$12.50 per M ...			\$884 12				
				75 loads cushion sand @ \$1.00 ...			75 00				
				Advertising .....			10 65				
				Engineering .....			50 00				
				Labor and teaming.....			921 52			1,941 29	.87631
				648 bags cement .....				\$183 06			
				648 " sand .....				6 48			
				32 1/2 tons crushed stone.....				35 75			
				Water .....				2 00			
				Use of mixer .....				27 00			
				Labor .....				171 00			
				Use of tools .....				20 61			
										445 90	.20128
										\$2,924 76	\$1.32025
				1 new catch basin .....					\$54 07		
				Repairing C. B. & M. H. ....					30 16		
				Edgestone .....					180 40		
				723.4 sq. yds. concrete laid .....					390 64		
				Flagging .....					133 12		
				306.3 yds. macadam, top-dressed ..					20 18		
				Use of tools .....					12 50		
				Engineering .....					56 16		
				358 bags sand.....					17 90		
				Cleaning .....					11 63		
				Repairing and paving gutter .....					189 37		
										1,096 13	
										\$4,020 89	

\* Total Engineering, \$106.16



## CHURCH STREET

B

Linear Feet	Square Yards	Cost per Square Yard	Total Cost Exclusive of Regulation	Labor, Material, Etc.	Sub-Grade	Foundation	Paving	Grouting	Regulation	Totals	Cost per Square Yard
1690.1	5584.63	\$2.68089	14.971 80	Labor and teaming.....	\$985 99						
				Use of tools .....	63 38						
				Engineering .....	74 50						
				1422½ tons crushed stone.....		\$1,564 75				\$1,123 87	\$0.20124
				Hauling " ".....		790 25					
				1798 bags cement.....		507 93					
				7192 " sand .....		71 92					
				Water .....		6 00					
				Use of mixer .....		42 00					
				Use of roller .....		20 00					
				Labor and teaming .....		421 54					
				Use of tools .....		126 76					
				Engineering .....		74 50					
				3415.14 sq. yds. new pavtng @ \$1.24			\$4,234 77			3,624 65	0.64904
				2169.49 " " recut @ .40 .....			867 80				
				232 loads sand.....			232 00				
				Labor and teaming .....			3,085 08				
				Advertising .....			10 65				
				Engineering .....			149 00				
				1431 bags cement.....				\$404 25		8,579 30	1.536233
				1431 " sand .....				14 31			
				75 tons crushed stones .....				82 50			
				Water .....				3 00			
				Use of mixer .....				45 00			
				Labor and teaming.....				1,031 54			
				Use of tools .....				63 38			
										1,643 98	0.29438
										14,971 80	2.68089
				1938.5 lin. ft. edge. reset.....					\$287 62		
				677.7 lin. ft. new edge. set.....					\$28 05		
				125.2 lin. ft. curve stone set.....					78 63		
				13.2 lin. ft. old curve stone set....					1 96		
				72.1 lin. ft. flagging laid .....					56 30		
				431.0 sq. yds. cinder grading .....					67 47		
				149.2 sq. yds. granite block, part relaid .....					44 34		
				4 new catch basins S. W. irons and grates .....					194 62		
				5 C. B. repaired .....					85 60		
				2 blue stone c. b. repaired .....					92 43		
				2 new sewer M. H. ....					42 96		
				11 M. H. repaired .....					97 39		
				Widening sidewalk.....					136 79		
				Removing trees .....					148 99		
				Engineering .....						1,663 14	
										16,634 94	

\* Total engineering, \$446.99



## C

Engineering \$85.78



## D

[illegible]





**GORHAM STREET**

E

Linear Feet	Square Yards	Cost per Square Yard	Total Cost Exclusive of Regulation	Labor, Material, Etc.	Sub-Grade	Foundation	Paving	Grouting	Regulation	Totals	Cost per Square Yard
751 0	2794.06	\$3.30341	\$9,229 94	Labor and teaming.....	\$1.371 11						
				Use of tools .....	28 17						
				Engineering .....	33 93						
				550 tons crushed stone.....		\$605 00				\$1,433 21	\$0.51295
				Hauling " .....		492 60					
				442 bags cement.....		124 86					
				1768 sand .....		17 68					
				Water .....		3 00					
				Use of mixer .....		21 00					
				Use of roller .....		25 00					
				Labor and teaming .....		588 14					
				Use of tools .....		56 32					
				Engineering .....		33 93					
				2654.57 sq. yds. new paving.....			\$3,291 67			1,967 53	0.70418
				79 loads sand.....			79 00				
				Labor and teaming .....			1,352 70				
				Advertising .....			10 65				
				Engineering .....			67 86				
				938 bags cement.....				\$264 98		4,801 88	1.71860
				938 sand .....				9 38			
				50 tons crushed stones .....				55 00			
				Water .....				2 00			
				Use of mixer .....				21 00			
				Labor and teaming .....				646 80			
				Use of tools .....				28 16			
										1,027 32	0.38768
										9,229 94	3.30341
				1432 lin. ft. old edgestone reset...							
				77.4 lin. ft. new edgestone set....					\$213 51		
				29.1 lin. ft. old curve stone reset ..					37 54		
				44.8 lin. ft. new curve stone set ...					4 37		
				108 lin. ft. flagging laid .....					28 22		
				79.5 sq. yds. old granite block, re-					14 00		
				paving .....							
				175.55 sq. yds. granolithic walk-					68 53		
				laid .....							
				629 sq. yds. concrete side-					218 19		
				walk laid .....							
				22.7 sq. yds. concrete side-							
				walk laid .....	@ .54				387 90		
				21.3 sq. yds. hard concrete							
				sidewalk laid.....							
				149.8 sq. yds. brick sidewalk laid .							
				Trees removed (5) .....					88 91		
				8 catch basins repaired S.W. irons					76 82		
				and grates ...					352 60		
				Engineering .....					67 86		
										1,538 45	
										10,768 39	

\* Total engineering, \$203.58



**EAST MERRIMACK STREET**  
(Between Fayette and High Streets)

F

Linear Feet	Square Yards	Cost per Square Yard	Total Cost Exclusive of Regulation	Labor, Material, Etc.	Sub-Grade	Foundation	Paving	Grouting	Regulation	Totals	Cost per Square Yard
335.5	1234.08	\$3.20820	\$3,959.18	Labor and teaming .....	\$370 54						
				Use of tools .....	12 58						
				Engineering .....	27 45					\$410 57	\$0.33269
				295 tons crushed stone .....		\$324 50					
				Hauling " " .....		153 75					
				482 bags cement .....		136 16					
				1,928 bags sand .....		19 28					
				Water .....		3 00					
				Use of mixer .....		15 00					
				Use of roller .....		30 00					
				Labor and teaming .....		230 10					
				Use of tools .....		25 16					
				Engineering .....		27 45				1,014 49	0.82206
				1234.08 sq. yds. new paving .....			\$1,530 28				
				60 loads sand .....			60 00				
				Labor and teaming .....			524 06				
				Advertising .....			10 65				
				Engineering .....			54 90			2,179 87	1.76639
				425 bags cement .....				\$120 06			
				425 bags sand .....				4 25			
				25 tons crushed stone .....				27 50			
				Water .....				2 00			
				Use of mixer .....				21 00			
				Labor and teaming .....				166 86			
				Use of tools .....				12 58		354 25	0.28706
										\$3,959 18	\$3.20820
				466½ lin. ft. old edgestone reset ..					\$108 00		
				30.1 lin. ft. new edgestone set .....					17 16		
				72.2 lin. ft. old curve stone .....					51 42		
				64½ lin. ft. old flagging laid .....					18 28		
				336½ sq. yds. concrete sidewalk laid .....					181 71		
				(Same price as Gorham St.)							
				Catch basins .....					153 09		
				Sewer manholes repaired .....					13 10		
				Engineering .....					54 90	597 66	
										4,556 84	

\* Total Engineering, \$164.70



**EAST MERRIMACK STREET**  
(Between Howe and Fayette Streets)

G

Linear Feet	Square Yards	Cost per Square Yard	Total Cost Exclusive of Regulation	Labor, Material, Etc.	Sub-Grade	Found-ation	Paving	Grouting	Regulation	Totals	Cost per Square Yard
198.0	342.00	\$3.23272	\$1,105 88	Labor and teaming.....	\$123 79						
				Use of tools .....	7 42						
				Engineering .....	6 26					\$137 47	\$0.40185
				90 tons crushed stones.....		\$59 00					
				Hauling " .....		23 75					
				138 bags cement.....		38 98					
				552 " sand .....		5 52					
				Water .....		1 00					
				Use of mixer.....		6 00					
				Use of roller .....		10 00					
				Labor .....		72 50					
				Use of tools .....		14 85					
				Engineering .....		6 25					
				320.27 sq. yds. new paving .....			\$381 02			277 85	0.81221
				17 loads sand.....			17 00				
				Labor and teaming.....			145 64				
				Advertising .....			10 65				
				Engineering .....			12 51			566 82	1.65694
				108 bags cement .....				\$30 51			
				108 " sand .....				1 08			
				7½ tons crushed stone .....				8 25			
				Water .....				1 00			
				Labor and Teaming.....				66 47			
				Use of mixer.....				9 00			
				Use of tools .....				7 43		123 74	0.36172
										\$1,105 88	\$2.23272
				170.3 lin. ft. old edgestone reset ..					\$40 87		
				15.1 lin. ft. new edgestone set ....					8 68		
				10.3 lin. ft. curve stone .....					7 42		
				228.4 sq. yds. concrete sidewalk } laid @ 54 .....							
				131 sq. yds T. D. sidewalk laid } @ 54 .....						130 41	
				1 catch basin rebuilt S. W. irons and grates, .....					33 69		
				Engineering .....					12 51		
										233 58	
										\$1,330 46	

\* Engineering \$37.53





## SEWERS BUILT BY THE CITY OF LOWELL IN 1912

H†

STREET	FROM	TO	SIZE AND LENGTH PIPE SEWERS					BRICK SEWERS		CUBIC YARDS LEDGE	AVERAGE DEPTH	MANHOLES	BEGUN	FINISHED	COST	TOTAL LENGTH
			8 in.	10 in.	12 in.	15 in.	18 in.	SIZE	LENGTH							
	Eugene Street (relaid surface).....	Bolton Street .....			495.						3.		Sept. 17....	Sept. 21 ...	\$551 95	495.
Billerica Street.....	Ayer Avenue .....	Northerly .....		125.2							10.		October 29	Nov. 6....	232 26	125.2
Boston Road .....	Suffolk Street.....	Common Street .....				597 9	53.				8.5	3	Nov. 11....	Dec. 31....	2,736 44	650.9
Cross Street.....	Lilley Avenue.....	Aiken Avenue.....		171.1							8.	2	April 14 ...	April 16....	423 99	171.1
Dalton Street.....	Burton Street.....	Westerly .....	248.2								7.	1	May 9 .....	May 31 ....	1,003 89	248.2
Damon Street .....	End Old Sewer .....	Near Aiken Avenue.....		126.8						24.	7.5	1	October 21.	Nov. 9 ....	657 81	126 8
Dana Street.....	End Old Sewer .....	Near Willie Street .....			287.8					253.	13	1	Sept. 30....	Unfinished.		287.8
Dutton St. (unfinished) ..																
Ferry Lane, Carolyn and Boisvert Streets.....	Lakeview Avenue .....	Near W. Sixth Street ..		179 3	309.2	223.2				340	9.	5	June 25	Oct. 8 ....	6,708 55	711.7
Hawthorne Street.....	Pine Street .....	Southerly ..			100 5						9.5		April 26....	May 4 ....	474 98	100.5
Highland Avenue.....	Parker Street.....	Northerly .....		119.2							9.		April 20....	April 26....	345 77	119.2
Holyrood Avenue.....	End Old Sewer ...	Near No. 168 .....		248 1							7.	1	Dec. 11....	Dec. 24 ....	777 66	248.1
Hurd and Central.....	Alley Near Central. ...	Across Central.....		203						2.	13.7	1	April 5 ...	April 25....	1,915 79	203.
Lawrence Street (relaid).	End of Old Sewer.....	Randolph .....						36"	312.	769.	19.	1	Oct. 18, '11.	May 4 ....	14,593 47	312.
Llewellyn and Third Sts. (200.5' 12" iron) .....	Merrimack River.....	Beacon Street.....		350 5	1527.8						8.	8	Sept. 16....	Dec. 4....	5,778 23	2078.8
Meadowcroft Street.....	Inlet (relaid).....	Near Lundberg .....			25.						7.5	1	May 23 ....	June 3 ....	159 23	25.
Middlesex Street.....	No. 1852 Middlesex.....	Grosvenor ..			1503.2						9.	8	Nov. 22....	Jan. 4, '13.	5,417 36	1503.2
Mt. Grove Street.....	(Iron) Third Avenue.....	Fourth Avenue .....	274								7.5	2	Sept. 9....	Sept. 19....	754 44	274.
Mt. Hope Street.....	Colonial Avenue .....	Northerly .....		89.1						32.	5.2		May 25....	June 7 ....	460 04	89.
Music Hall Avenue .....	Dutton Street.....	Northerly .....			127.4					250.	13.5	1	June 11....	Sept. 26....	3,977 51	127.4
Pawtucket Street .....	End Old Sewer .....	Salem Street .....			64.						5.5	1	Sept 26....	Sept. 29....	193 26	64.
Phebe Avenue.....	Sarah Avenue.....	Northerly .....		178.5							8.5	1	May 15....	May 22 ....	421 42	178 5
Plain Street .....	Quebec Street.....	Penn Avenue .....		201.2							9.	1	June 4 ....	June 11....	484 65	201.2
Poplar Street .....	Main Street.....	Cottage Place .....		136.2							8.	1	Dec. 5....	Dec. 11....	376 31	136.2
Riverside Street .....	Sparks Avenue.....	Dracut Town Line .....			1002.6					3.	10.	5	June 25....	Sept. 13....	4,178 55	1002 6
Saratoga Street.....	Chippewa Street.....	Easterly .....		107.6							8.		June 1 ....	June 6 ....	271 77	107.6
Tenth Street No. 1.....	No. 204 Tenth Street ..	Christian Street.....			512 1						10.	1	June 17....	July 17 ....	1,506 05	512.1
Tenth Street No. 2 .....	Christian Street.....	Mt. Pleasant Street.....			109 8						9.	1	July 7.....	July 23 ....	449 10	109.8
Troy Street.....	Stevens Street.....	Harvard Street.....		365.5							8.5	2	June 1 ....	June 14 ....	882 82	365 5
Varnum Avenue.....	(Surface) at Fowler Rd			147.							5.		August 27..	August 30..	119 84	147.
Viola Street .....	Chelmsford Street.....	Westerly .....			448.6						7.	2	May 3 ....	May 31 ....	1,421 36	448 6
West Street .....	(Outlet 24" cast iron pipe)	At Merrimack River...									6.5		July 24....	October 12.	2,568 47	145.
West Sixth No. 1.....	Boivert Street.....	Easterly .....		190.						2.	9.5		June 7 ....	June 20 ....	523 01	190.
West Sixth No. 2.....	End Old Sewer .....	Ferry Lane .....		124.							6.5	1	June 20 ....	June 24 ....	333 15	124.
Winthrop Avenue.....	Wilder Street.....	Easterly .....		214.3							6.5	2	June 12 ....	June 27 ....	683 46	214.3

Linear feet of sewers laid in 1912..... 11843.4 or 2.24 miles.

Sewers previously laid ..... 107.89 miles.

110.13 miles.

Deduct 520 feet of sewers relaid ..... .09 miles.

Length of sewers January 1, 1913 ..... 110.04 miles



SUMMARY OF  
SEWERAGE STATISTICS

IN FORM

RECOMMENDED BY

SANITARY SECTION

OF

Boston Society Civil Engineers

FOR THE YEAR ENDING  
DECEMBER 31, 1912

## GENERAL

Population by census of 1910 .....	106,294
Total area of City .....	14.1 square miles.
Area served by sewerage system .....	About 10 square miles.
Collection system {	
For sewage only .....	1.19 miles.
For sewage and surface water. ....	106.73 miles.
For surface water only .....	2.12 miles.
Method of Disposal—Discharged into Merrimack and Concord Rivers.	

## COLLECTION

Mains, (Everything but House and Catch Basin Connections).

	For Sewage Only	For Sewage and Surface Water	For Surface Water Only
1. Lineal feet stone .....		6,125	
2. Lineal feet brick .....		170,699	
4. Lineal feet pipe .....	6,270	388,268	10,576
5. Lineal feet extended during year.		11,843	
8. Method of flushing—By hose connections with hydrants and Water Works blow-offs.			
	For Sewage Only	For Sewage and Surface Water	For Surface Water Only
11. Number of direct connections with water mains for flushing.		5	
13. Cost of flushing per mile .....		\$112 00	
14. Number of miles cleaned .....		83	
15. Cost of cleaning per mile .....		\$225 00	
16. Number of stoppages .....		12	
18. Number of storm overflows .....		10	
19. Method of ventilation .....		Through manholes	
20. Cost of maintaining sewer system exclusive of disposal works (including cost of flushing and cleaning sewers; cost of cleaning catch basins; administration and unclassified expense) ..		\$18,000 00	

## HOUSE CONNECTIONS

21. By whom made .....	Local contractors
22. Sizes .....	5 to 8 inches
23. Number made during year.....	168
24. Lineal feet laid during year .....	5,000
27. Average cost per foot connections made during year .....	\$0 50
28. Number of stoppages coming to attention of department .....	56

## CATCH BASINS

29. Number .....	3,716
30. Number cleaned .....	All
31. Average amount material removed per catch basin.	1.2 cu. yds.
32. Cost of removing material per cubic yard.....	\$1.30
33. Cost of removing material per catch basin per year	\$1.55

## DISCHARGE OF SEWAGE

34. Estimated population using sewage system.....	101,500
35. Number of buildings connected .....	12,200



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# FIRST ANNUAL REPORT

OF

# FIRE COMMISSIONER

OF THE FIRE DEPARTMENT  
OF THE CITY OF LOWELL

---



---

FOR THE YEAR NINETEEN HUNDRED AND TWELVE



# REPORT

---

LOWELL, MASS., Jan. 1, 1913.

TO THE MUNICIPAL COUNCIL OF THE CITY OF LOWELL.

GENTLEMEN :—

I herewith submit my first annual report of the Fire Department for the year ending Dec. 31, 1912.

The following statement will show the receipts and expenditures for the year.

---

## RECEIPTS

Appropriation, salaries and wages . . . . .	\$164,985 56
Appropriation, other expenses . . . . .	26,769 44
Transfers and receipts . . . . .	668 12
	<hr/>
	\$192,423 12

## EXPENDITURES

Fire Alarm . . . .	\$ 1,022 06	
Automobiles and repairs of same . . . . .	2,879 81	
Furniture and bedding .	135 40	
Chemicals, etc. . . .	115 34	
Hose . . . . .	139 65	
Freight and express .	27 83	
Coal and wood . . .	3,167 11	
Harnesses and repairs .	231 73	
Hay and grain . . .	7,706 15	
Horses, use of . . .	48 00	
Laundry . . . . .	175 62	
Lighting . . . . .	2,084 88	
Printing and stationery .	73 30	
Repairs . . . . .	278 07	
Shoeing . . . . .	1,377 21	
Soap . . . . .	148 60	
Sundries . . . . .	1,045 28	
Telephone . . . . .	268 69	
Veterinary . . . . .	244 50	
Wagon repairs . . .	582 95	
Water bills . . . . .	441 21	
	<hr/>	
	\$ 22,193 39	
Salaries and wages . .	152,179 74	
	<hr/>	
		\$174,373 13
		<hr/>
Balance . . . . .		\$ 18,049 99



Three new Combination Hose Wagons and Chemical Engines have been ordered and will be paid for out of the balance left from the appropriation, as will also 2000 feet of new hose.

These motor vehicles are being made by the Knox Automobile Company of Springfield, Mass., the Seagrave Company of Columbus, Ohio, and the Robinson Fire Apparatus Mfg. Co. of St. Louis, Mo. The Knox car will be installed at the High Street Engine House; the Seagrave at the Branch Street Engine House, and the Robinson at the Race Street Engine House. Two runabouts for the use of the District Chiefs have been purchased this year. It is my intention to purchase two more new pieces of motor apparatus in 1913.

I have endeavored during the year to increase the efficiency of the department in every way possible and I wish to thank the Chief, the District Chiefs, and all members of the department for their faithfulness and cooperation.

Details of the general work of the department will be found in the Chief's report which follows.

Respectfully submitted,

ANDREW E. BARRETT,

Commissioner of Fire Department.



# CHIEF'S REPORT

---

CHIEF'S OFFICE,  
PALMER ST. ENGINE HOUSE,  
LOWELL, January 1, 1913.

MR. ANDREW E. BARRETT,

Commissioner of Water Works and Fire Protection of  
the City of Lowell.

DEAR SIR :

In accordance with the requirements governing the Fire Department, it becomes my duty, as Chief Engineer, to present to you the annual report of the Fire Department of the City of Lowell for the year ending December 31, 1912.

The report will be found to contain statements in detail embracing a record of all fires and alarms which have occurred during the year and the cause thereof, with the names of the owners and the occupants, the loss and insurance, as nearly as could be ascertained and such information as is thought proper for your consideration.

## SALARIES OF MEMBERS OF FIRE DEPARTMENT

Chief Engineer.....	\$2,200.00 per annum
District Chiefs .....	1,500.00 per annum
Assistant Engineer .. . . .	450.00 per annum
Call Men.....	250.00 per annum
Permanent Men .....	3.00 per day
Captains of Companies (Permanent)..	3.35 per day
Engineers of Steamers “	3.25 per day
Lieutenants of Companies “	3.25 per day

This department is divided into two classes, Permanent and Call. The permanent force consists of

1 Chief Engineer	25 Drivers
2 District Chiefs	23 Laddermen
1 Fire Alarm Operator	6 Engineers of Steamers
50 Hosemen	7 Patrolmen
1 Lineman	

A total of 115, of which 17 are Captains and 18 Lieutenants.

The call force consists of

1 Assistant Engineer	50 Hosemen
14 Laddermen	

A total of 65.

This makes a total of 180, divided into companies as follows :

6 Steam Fire Engines, with Hose Wagons.

6 Horse Hose Companies,

4 Hook and Ladder Companies, 2 with Chemical Engines attached.

1 Protective Company.

The changes in the force during the year have been as follows :

Promoted.....	1
Transferred .....	20
Died .....	3
Pensioners, died.....	1

The apparatus is kept in the best possible condition, and consists at present of six Engines, twelve two-horse Hose Wagons, one Babcock and one LaFrance Aerial Truck and two trucks of other patterns, two Chemical Engines, one Hale Water Tower, one Auto Patrol Wagon, fully equipped, one Auto Combination Hose Wagon, seven Hose Pungs, eight Fuel Wagons, two Wagons and one Sleigh for use on Fire Alarm, one Auto and one Wagon for Chief's use, two Autos for the District Chiefs' use, and thirty Fire Extinguishers. In reserve there is one two-horse Hose Reel.

The Chief's car has run twenty-seven hundred miles the past year.

#### FIRE ALARM

This branch of the service has been maintained in most excellent condition by the operator, Mr. H. C. Fernald.

There have been two hundred and twenty-six alarms given from signal boxes, and the "No School" signal has been given eighteen times during the past year.

Connected with the circuits there is one ten-circuit non-interfering repeater, one ten-circuit, cut-out and testing switchboard, one slate protector, twelve galvanometers, twelve bell-strikers, seventeen large gongs for engine houses,

eight small gongs, eighteen indicators, one tape register, sixteen electro-magnets and connections for opening stall doors, one hundred and thirty-two public and thirteen private signal boxes, one hundred and twelve miles of wire, the whole supplied with a storage battery of seven hundred fifty cups, which have been replaced with new ones this year.

There is also one large gong and indicator combined in the Police Station, one large gong in Pumping Station, Merrimack Square, Tower's Corner, Bridge and First Streets, Middlesex and Thorndike Streets, and Moody and Aiken Streets.

#### TELEPHONE

There are connected with this system twenty-one stations, consisting of transmitter, telephone bell and battery ; there are also twenty-eight tap bells for the rooms of the Engine Houses, and about forty-four miles of wire owned by the city, under the care of the Fire Alarm operator, except the receivers and transmitters, which are leased from the Telephone Company. The ringing line is supplied by a storage battery of one hundred and fifty cups. There are sixty cups of carbon battery.

#### GAS LIGHTING

Ninety cups of carbon battery are used for the gas lights.

#### HORSES AND HARNESES

There are fifty-six horses in the service of this department ; twelve sets of double, ten sets of three-horse hitch, and four swinging harnesses of the Berry and Hale patents.

## PROTECTIVE DEPARTMENT

This department is maintained by the City and consists of nine permanent men. They have responded to four hundred and four alarms; in service four hundred and fifty-seven and one-half hours; spread four hundred and ninety-five covers; used one hundred and seventy-three extinguishers and eighty-four tanks; raised seven hundred and seventy-five feet of ladders; six hundred and forty-seven hours inspection duty; traveled nine hundred and forty-five and one-half miles.

Chemical B, attached to Truck 3, used forty-eight (eighty-five gallons) tanks. Chemical C, attached to Truck 2, used sixty (eighty-five gallons) tanks.

## FIRES AND LOSSES

The whole number of alarms during the year ending December 31, 1912, was nine hundred and fifty-nine (959). Two hundred and twenty-six (226) were given from signal boxes; four hundred and fifty-six (456) telephones; ninety-seven (97) stills; twenty-two (22) automatics; twenty-one (21) exposures; and one hundred and thirty-seven (137) reported fires. The "No-Signal" signal was given eighteen (18) times. There were four hundred and seventy (470) fires extinguished by chemicals alone, and two hundred and thirteen (213) where water was used. The remaining number were extinguished by other means or had been put out before the arrival of the department. One hundred and eighteen (118) were in brick or stone buildings; four hundred and forty-seven (447) in frame buildings, and two hundred and fifty-seven (257) other than building fires. The reported fires were mostly in frame buildings.



The whole amount of loss except the reported fires was two hundred and sixty-four thousand five hundred and twenty-eight dollars and twenty-three cents, (\$264,528.23). Insurance one million two hundred and forty-three thousand eight-six dollars and sixty-eight cents, (\$1,243,086.68), insurance paid two hundred and fifty-four thousand nine hundred and fifty-two dollars and twenty-four cents, (\$254,952.24). Loss above insurance, nine thousand five hundred and seventy-five dollars and ninety-nine cents, (\$9,575.99). Valuation, four million eight hundred and ninety thousand three hundred and fifty-one dollars and fifty-six cents, (\$4,890,351.56). The reported loss was five thousand eight hundred and eighty-one dollars and two cents, (\$5,881.02), insurance five million one hundred and fifteen thousand three hundred and sixty-four dollars and twenty-five cents, (\$5,115,364.25), valuation, five million seven hundred and fifteen thousand seven hundred and fifty dollars, (\$5,715,750.00).

There have been twelve (12) alarms out of the City to which some part of the department has responded, for which no insurances are kept; Dracut 3, Tewksbury 1, Chelmsford 7, Billerica 1.

There have been twenty-four (24) fires where the loss was \$1,000.00 and over. January 12th, M. T. Stevens Est., Market St., occupied by the Cudahy Packing Co., loss \$2,974.88. January 12th, E. J. Barrett's stable on School St., loss \$1,900.00. February 5th, A. C. Wheelock Est. on Central St., several occupants, loss \$1,880.87. February 17th, grocery store on Coburn St. owned by John and Ellen Szymanski, occupied by T. Chadkowski, loss \$1,113.50. February 20th. Otis Allen & Son, box shop on Mt. Vernon St.,

loss \$11,682.63. March 5th, A. C. Winters' dwelling on Bond St., loss \$2,270.00. March 7th, Estate of O. W. Richardson on Mt. Pleasant St., loss \$1,821.32. March 27th, block on Market St., owned by Carrie E. Coburn, occupied by C. B. Coburn Company, loss \$28,796.12. April 25th, barn owned by Tom Varnum on Varnum Ave., loss \$1,000.00. May 26th, block owned by J. L. Chalifoux Est., on Merrimack corner of Hanover St., occupied by J. C. Manseau, gent's furnishing, loss \$4,834.55. June 22nd, Friend Bros., bakery and adjoining property on Westford St., loss \$13,727.70. June 23rd, C. S. Dodge's machine shop on Payne St., loss \$13,042.51. July 11th, City Stables on Chelmsford St., loss \$5,390.00. August 6th, W. L. Parker Co., bobbin shop on Dutton St., loss \$10,942.35. September 4th, block on Fletcher St., owned by Charles E. Gee, occupied by Charles E. Gee and the New England Electric Co., loss \$2,419.91. October 2nd, block on Central St., owned by S. N. Proctor Est., several occupants, loss \$1,873.00. October 15th, block on Moody St., owned by H. B. Chaffee, occupied as a bakery and club room, loss \$1,442.00. October 23rd, dry house on Tanner St., owned and occupied by the Lowell Shuttle Co., loss \$1,247.09. November 2nd, church on Rogers St., owned by the Catholic Lithuanian Church, loss \$4,864.00. November 9th, block on Cushing St., owned by M. Lehue, several occupants, loss \$1,092 00. November 13th, Grand Stand on Rogers St., owned by the Lowell Base Ball Club, loss \$6,740.00. November 21st, St. Jean Baptiste Church on Merrimack St., loss \$110,466.50. December 13th, stable on Burton St., owned and occupied by Blanche Robinson, loss \$2,200.00. December 30th, A. Lavery's bakery on Broadway, loss \$3,264.09.

The total loss on these twenty-four (24) fires was \$236,985.02, (nearly one-half of this loss was on one fire, the St. Jean Baptiste Church) leaving \$27,543.21 to be divided between the other seven hundred and ninety-eight (798) alarms.

The following is the total number of buildings of all kinds in the City :

Total number of wood buildings .....	18,216
Total number of brick buildings .....	1,004
Total number of stone buildings .....	80
Total number of cement buildings ... ..	57
Total number of wood and glass buildings.... .	44
Total number of wood buildings covered with tin....	9
Total number of steel buildings .....	6
Total number of iron buildings .....	6
Total number of concrete buildings.....	3

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Total number of buildings of all descriptions.... 19,425

An increase during the past year of ..... 278

Some of these blocks have from four to twenty tenements.

The following table shows the number of alarms of fire each month :

January .....	71	August .....	30
February .....	48	September .....	46
March .....	53	October .... .	67
April .....	60	November .....	82
May .....	52	December .... .	107
June .....	89	Reported .....	137
July .....	117		

---

Total..... 959

The following table shows the causes of the different alarms as near as could be ascertained :

Acid tank leaking....	1	Dust chute .. . . . .	2
Alarms for same fire...	33	Dust in furnace pipe...	1
Ash barrell .....	7	Electric light set cellu-	
Ash chute .....	2	loid combs .....	1
Automobiles .....	11	Exposure .. . . . .	18
Awning .....	4	False alarms.....	20
Bed .....	1	Fat on stove .. . . . .	5
Boiler smoking.....	1	Fire crackers set roof..	6
Bog fire .....	2	Fire crackers set rubbish	2
Bonfire .....	2	Flasks caught fire .....	1
Bread in oven.....	1	Flooding pond .....	1
Brush .....	11	Flushing park .....	1
Burning paper in cellar	1	Fumigating .....	2
Burning paint with torch	1	Furnace smoking .....	4
Calling Militia .....	1	Fuse burned out.....	1
Candle set bed.....	1	Fuse box.....	1
Careless smoking.....	21	Gas iron .....	3
Careless use of matches	21	Gas jet set curtain.....	6
Careless use of lantern	1	Gas jet set wood.....	1
Children and matches..	14	Gas leak .....	10
Chimney .....	80	Gas meter .....	1
Cigarette .....	32	Gas stove .....	1
Clothes in closet.....	7	Gasoline caught fire....	6
Combustion.....	25	Gasoline in sewer.. ...	1
Defective Chimney....	4	Grass .....	69
Defective motor.....	2	Hot ashes .....	3
Drying plaster.....	2	Hot stove set clothes...	1
Dump .....	67	Hot stove set partition .	1

Incendiary .....	1	Rubbish .....	20
Incubator caught fire...	1	Sawdust in register ....	1
Lightning .....	7	Sawdust spittoon .....	2
Matches in closet.....	2	Second Alarms.....	3
Matches in pocket...	1	Shavings in cellar.....	1
Match set awning ....	2	Siphon water .....	1
Match set curtain.....	3	Spark from bonfire.....	1
Meat on stove.....	7	Spark from chimney ...	1
Mistake in calling.....	2	Spark from forge .....	1
No school ....	18	Spark from locomotive.	4
Overheated boiler.....	7	Spark from stove .....	1
Overheated glue pot...	1	Spark from sand paper	
Overheated locomotive.	1	machine .....	1
Overheated oven .....	3	Spark set clothes .....	1
Overheated stove.....	5	Spark set cotton.....	1
Overheated stove pipe..	1	Spark set roof.....	27
Overheated thermostat.	13	Spark set trestle .....	1
Oil lamp .....	8	Smoke .....	3
Oil lantern .....	2	Smoke house.....	2
Oil stove. ....	3	Smoke in basement ...	1
Out of the city ....	14	Smoking in bed.....	9
Picker caught fire ....	1	Spontaneous combustion	1
Rags .....	2	Steam escaping.....	4
Rats' nest .....	5	Stove exploded.....	1
Rekindled .....	14	Stove rags .....	3
Reported alarm .....	137	Stove smoking .....	7
Roof leaking.....	1	Supposed incendiary ...	5

Syrup caught fire.....	1	Tree .....	1
Tar caught fire.....	1	Unknown .....	12
Testing new system....	1	Wall paper and frost...	1
Thawing water pipe ..	22	Water leak .....	8
Thermostat system out of order ....	4	Water out of boiler ...	1
Third alarm .....	1	Wetting buildings ...	8
Toy pistol set bed.....	1	Wires crossed.....	2
Transformer caught fire	2	Wire set tree....	7

# SERVICE OF THE DEPARTMENT FOR 1912

	Number of alarms attended	Number of hours worked	Feet of hose laid	Hours of hydrants in use	Number of extinguishers used	Number of chemical tanks used	Feet of ladders raised	Hours engines worked	Number of covers used
Engine	123	137	12,250	45 1-2	50			6 1-2	
"	167	189 1-4	20,300	46	33			21 1-4	
"	213	223 1-4	11,000	38 1-2	26			7 3-4	
"	171	248	9,950	28 1-2	47			14 1-2	
"	110	145 1-2	14,150	36 3-4	47		654		
"	143	122 1-2	14,750	38 3-4	21			19 1-4	
Hose	166	194 1-2	8,100	23	80				
"	163	132 3-4	9,950	32 1-4	48				
"	107	146 3-4	11,950	51 1-2	49				
"	128	185	13,150	59 3-4	17		748	10	
"	85	72 1-2	6,050	10 3-4	57				
"	145	210 1-2	22,100	63 1-4	42				
Truck	83	110 1-2					3,042		
"	181	222				60	1,880		
"	241	294 1-2				48	3,789		
"	112	144					2,011		
Protective	404	457 1-2			173	84	775		495
	2,742	3,238	153,700	474 1-2	690	192	12,899	79 1-4	495

647 hours inspection duty.



The following are the number of alarms answered by members of the department on their days off:

Capt. Bartlett, 9; Capt. Baxter, 2; Capt. Boynton, 1; Capt. Brown, 2; Capt. D'Amour, 2; Capt. Dolan, 1; Capt. Foley, 2; Capt. Fuller, 3; Capt. Halstead, 9; Capt. Hemenway, 10; Capt. Hoyt, 1; Capt. Hurley, 4; Capt. McKissock, 4; Lieut. Abare, 3; Lieut. Adams, 3; Lieut. Akers, 1; Lieut. Collins, 2; Lieut. Dearth, 1; Lieut. Dunn, 4; Lieut. Dwyer, 3; Lieut. Flint, 6; Lieut. Halstead, 8; Lieut. Harris, 1; Lieut. Knapp, 1; Lieut. McCafferty, 12; Lieut. Rogers, 2; Lieut. Shea, 4; G. S. Alcott, 1; J. F. Ambrose, 1; E. S. Barnes, 7; W. M. Barrett, 1; J. N. Bernier, 1; F. Boynton, 1; R. W. Broadbent, 5; J. M. G. Burns, 3; R. E. Burns, 1; G. A. Campbell, 1; R. Carland, 6; C. H. Cogswell, 6; C. Collins, 1; F. G. Collins, 1; M. I. Collins, 1; T. F. Conway, 2; D. F. Conroy, 1; E. J. P. Cunningham, 4; W. T. Dolan, 1; J. J. Donohoe, 3; T. J. Dwyer, 2; W. F. Eagan, 7; M. E. Eagan, 1; J. N. Emerson, 1; J. D. Finnegan, 3; J. E. Fontaine, 8; W. T. Foss, 7; H. L. Foster, 8; Q. A. Foster, 1; J. J. Flynn, 2; H. S. Gardner, 1; W. J. Heelon, 2; W. S. Holt, 1; J. D. Ismond, 1; J. W. Jantzen, 7; A. E. Kidder, 13; E. Landry, 8; E. Lepene, 1; G. W. Lovett, 4; J. J. Lowney, 2; J. T. McGuinness, 2; P. McLaughlin, 1; T. F. Maguire, 2; P. F. Mahoney, 3; W. P. Maker, 1; A. S. Maynard, 5; P. Mooney, 1; P. J. Mooney, 1; H. R. Morrison, 1; W. H. Oke, 1; J. O'Hare, 2; J. C. O'Neil, 1; R. Otley, 6; S. R. Pendexter, 3; E. Perham, 1; A. F. Prescott, 1; L. P. Reed, 3; B. C. Reed, 2; J. J. Rinehardt, 5; J. H. Rogers, 4; M. C. Rowell, 2; D. W. Russell, 1; T. F. Saunders, 4; G. E. Schofield, 3; R. W. Sloan, 2; E. E. Smith, 2; C. F. Stackpole, 3; W. F. Tighe, 5; F. O. J. Townsend, 1; E. A. Walsh, 1.

There were seven deaths by burning the past year. April 4th, Peter Malos, 3 years old, playing with matches, set clothes, Bridge Street. May 3d, Anastios Maharas, 3 1-2 years old, pushed into a bon fire, Market Street. May 5th, Alice Dumont, 4 months old, clothes caught fire from hot stove, Eugene Street. July 1st, Lydia Sylvia, 6 years old, playing with matches, set clothes, Warnock Street. August 15th, Arthur Bedad, 4 years old, playing with matches, set clothes, Adams Street. December 10th, died the 13th, Mrs. Honora Dunfey, 63 Sixth Avenue, clothes caught fire. December 28th, Peter Hoye, oil lamp exploded, Tyler Street.

There have been four deaths in the department the past year. Asst. Chief J. F. Norton died February 25th. He joined the department November, 1889. Everybody knew "Jimmy," William J. Flynn, a pensioner, died March 2d. He joined the department April, 1885. R. W. V. Sloan, a permanent man, died July 10th. He joined the department May, 1908. E. D. Kerwin, a call man, died July 25th. He joined the department May, 1871.

The following is a list of the men injured the past year. Asst. Engineer C. E. Alway, Capt. J. E. Burns, Engine 4, Capt. D. J. Hurley, Engine 6, C. F. Stackpole, G. A. Crawford and J. J. Malone, Engine 2, J. M. G. Burns and P. J. Mooney, Engine 4, J. J. Frazier, R. J. Hayes and C. F. Cronin, Engine 5. Lieut. J. A. Shea and P. Emerson, Hose 7, J. J. Flynn, Hose 10, J. E. Burns, Hose 11, William Foss and Major Wright, Truck 3, G. S. Alcott, Truck 4, J. W. Rinehardt and D. W. Russell, Protective Company.

### LOWELL FIREMEN'S FUND ASSOCIATION

This benevolent Association was organized Dec. 17, 1885, for the purpose of furnishing relief to such of its members as should receive injuries while in the discharge of their duties. The income is derived from an annual assessment upon each member, and by donations from citizens and others; and in behalf of the members of the association, I would return thanks to all those who have aided us in the past.

The following donations have been received during the past year:

C. B. Coburn Co.....	\$100 00
C. S. Proctor.....	25 00
	<hr/>
	\$125 00

The following statement shows the amount standing to the credit of the Association Dec. 31, 1912.

Balance on hand, Dec. 31, 1911.....	\$24,316 32
Cash received to Dec. 31, 1912.....	1,239 15
	<hr/>
Total.....	\$25,555 47
Cash paid out.....	2,058 74
	<hr/>
On hand Dec. 31, 1912.....	\$23,496 73

In conclusion I wish to thank the officers and members of the Department for their promptness and efficiency in the performance of their duties. To Commissioner Barrett, the Mayor, the Municipal Council, and all others who have in any way assisted me in the discharge of my duties, I extend my sincere thanks.

Respectfully submitted,

E. S. HOSMER,

Chief of Fire Department.

**FIRE DEPARTMENT****JANUARY 1, 1913**

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**COMMISSIONER**

ANDREW E. BARRETT    -    -    Office, City Hall

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**CHIEF ENGINEER**

EDWARD S. HOSMER, Office, Palmer St. Engine House  
Residence, 202 Westford Street

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**DISTRICT CHIEFS**

E. F. SAUNDERS    -    -    24 Mt. Washington Street  
J. C. SULLIVAN    -    -    -    -    250 Rogers Street

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**ASSISTANT ENGINEER**

CHARLES E. ALWAY    -    -    16 West Bowers Street

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**CHIEF'S CHAUFFEUR**

H. B. SANDERS    -    -    Palmer Street Engine House

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**TELEGRAPH OPERATOR**

HENRY C. FERNALD    -    Palmer Street Engine House  
TOM McCORMICK, Lineman

## FIRE ALARM TELEGRAPH

LOCATION	-	-	-	Palmer Street Engine House
HENRY C. FERNALD	-	-	-	Operator
TOM MCCORMICK	-	-	-	Lineman

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Ten-Circuit Automatic Repeater with Storage Battery of  
750 Cups.

Miles of Wire	-	-	-	-	-	-	-	112
Signal Boxes	-	-	-	-	-	-	-	145
Engineers' Gongs	-	-	-	-	-	-	-	8
Engine House Gongs	-	-	-	-	-	-	-	17
Indicators	-	-	-	-	-	-	-	18
Tape Register	-	-	-	-	-	-	-	1
Bell Strikers	-	-	-	-	-	-	-	12

Gong and Indicator at Police Station.

Gong in Pumping Station.

Gong on Merrimack Square.

Gong on Tower's Corner.

Gong at Northern Depot.

Gong corner Bridge and First Streets.

Gong corner Moody and Aiken Streets.

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The strikers are located as follows. Palmer Street Engine House, Varnum School House, High Street Church, Court House, No. 1 Engine House, Franklin School House, Pawtucketville Engine House, No. 6 Engine House, Highland School House, Lawrence Street Engine House, Cornell Street School House, West Sixth Street Engine House.

## TELEPHONE CIRCUIT

Complete Stations	-	-	-	-	-	-	-	21
Tap Bells (Extra)	-	-	-	-	-	-	-	28
Miles of Wire	-	-	-	-	-	-	-	44

Storage Battery of 150 Cups.

Carbon Battery of 60 Cups.

Carbon Battery of 90 Cups used for Gas Lighting.

The value of all property, as near as can be ascertained, in care of the Chief of this Department, is \$154,000.00.



Tenth Annual Report

OF THE BOARD  
OF

Park Commissioners

OF THE

CITY OF LOWELL

FOR THE

Year Ending December 31, 1912



PRINTED BY  
C. I. HOOD CO., LOWELL, MASS.  
1913



# Department of Public Parks

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## COMMISSIONERS' REPORT

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*To His Honor the Mayor, and the Municipal Council of  
the City of Lowell, Massachusetts.*

As required by Chapter 28, Section 13, of the Revised Laws of Massachusetts, entitled "Public Parks, Playgrounds and the Public Domain," the Board of Park Commissioners of the City of Lowell have the honor to submit their annual report.

# Board of Park Commissioners

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1912 - 1913

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\*JOHN J. PICKMAN, 1908-1913.

ALEXANDER E. ROUNTREE, 1912-1917.

HENRY F. CARR, 1911-1916.

\*THALLES P. HALL, 1910-1915.

\*HARVEY B. GREENE, 1909-1914.

\* Re-appointed.

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## FORMER COMMISSIONERS

PERCY PARKER, 1903-1911.

JOHN E. DRURY, 1903-1912.

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## OFFICERS

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*Chairman,*

JOHN J. PICKMAN.

*Secretary,*

ALEXANDER E. ROUNTREE.

*General Superintendent,*

CHARLES A. WHITTET.

*Consulting Engineer,*

STEPHEN KEARNEY, City Engineer.

## Park Areas and Their Valuation

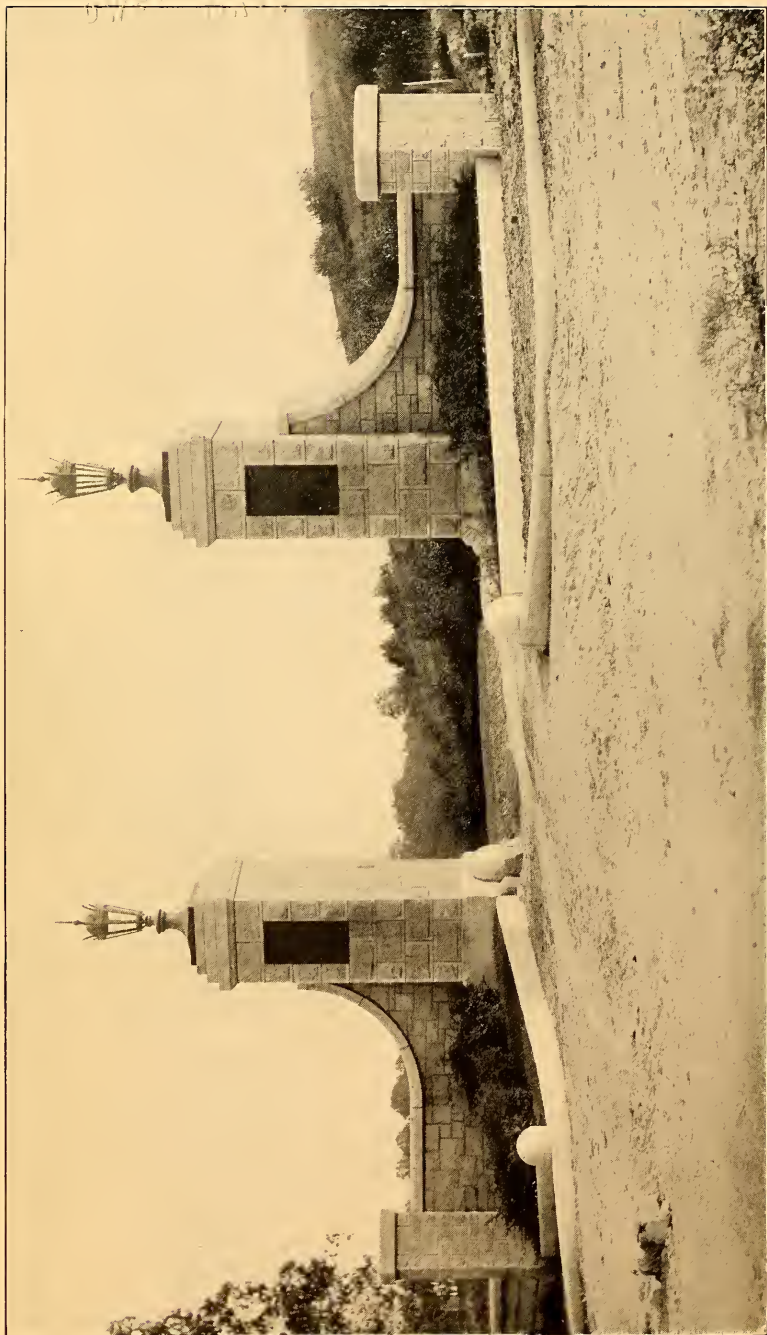
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The Rogers Fort Hill Park,	34.40	Acres	\$150,000
The South Common,	22.48	"	200,000
The North Common,	11.39	"	100,000
Tyler Park,	1.81	"	8,000
Belvidere Park,	1.77	"	20,000
Mt. Vernon Park,	0.50	"	4,350
Varnum Park,	0.136	"	6,000
Monument Square,	0.092	"	15,000
Penniman Square,	0.051	"	450
Lincoln Square,	0.016	"	200
Hovey Square,	0.010	"	50
Mansur Square,	0.040	"	150
Water Works Square,	0.047	"	500
Coburn Square,	0.252	"	1,000
Hutchinson Square,	0.037	"	150
Lenox Square,	0.181	"	1,500
Franklin Square,	0.058	"	1,500
Princeton Square,	0.028	"	150
Middlesex Square,	0.034	"	200
Lincoln Playground,	1.525	"	6,000
Fayette Street Playground,	0.170	"	2,000
Varnum Avenue River-bank,	0.456	"	1,500
Colonial Avenue River-bank,	3.50	"	2,000
Glacial Oval,			100
City Hall and Memorial Grounds,	0.50	"	65,700
Shedd Playground,	56.00	"	50,000
*Lucy Larcom Park,	0.50	"	21,970
Parker-Spalding Park,	0.043	"	60
Hillside Park,	0.061	"	80
Harris Oval,	0.12	"	366
<hr/>			
Total,	136.207	Acres	\$658,976

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\* Held by the Chairman of the Park Commission and the Mayor as Trustees, not under the direct charge of the Park Commission.





ENTRANCE GATEWAY TO SHEDD PLAYGROUND.

# Report of the Park Commission

For the Year 1912

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The Tenth Annual Report of the Park Commission of the City of Lowell is herewith presented. The tracts of land known as the South Common and the North Common were acquired by the City in the year 1845. At the time, doubtless, there were many privately owned unfenced open spaces of land in all parts of the City that were available to the public for rest and recreation; but the City was growing rapidly, and it was wise foresight to obtain seasonably these tracts of land in the north and south parts of the City for the public use. The common or village green, as it was called, in the early history of New England settlements, was as much a part of the village and town belongings as were the town house or the town pump. The commons were used for training grounds for the militia and for open air meetings, and in many of the larger towns and cities in later years for firemen's musters. There was an abundance of land; large open spaces grassed and well kept served to enhance the attractiveness of the places in which they were located. In the very early history of this City the commons were not under the care of a committee known dis-

tinctively as the committee on commons, but were in the charge of some other department of the City or were left without any especial supervision by a department of the City. In 1845, for the first time, a committee on commons was appointed by the City Council, and thereafter a committee on commons was appointed annually until the parks and commons were put into the care of the Park Commission.

The first Park Commission was appointed by his Honor the Mayor, Charles E. Howe, on January 27th, 1903. The personnel of the Board continued unchanged until the year 1910. The first Superintendent of Parks was appointed in the year 1881, James McLaughlin being appointed to the position. The office of Superintendent has been continued since that time. When the Park Commission entered upon the discharge of its duties in the month of May, 1903, there were five parks, two commons and three squares in the City with an area of 72.616 acres. At the present time there are ten parks, two commons, and fourteen squares and two playgrounds, with an area of 136.207 acres.

Since the Park Commission was appointed the following tracts of land have been given to the City for park purposes :

Shedd Playground,  
Harris Oval,  
Hillside Park,  
Glacial Oval,  
Hovey Square,  
Mansur Square,  
Coburn Park,



Hutchinson Square,  
Parker-Spalding Square.

Placed in the care of the Park Commission from the  
Street Department:

Lincoln Square,  
Water Works Square,  
Princeton Square,  
Middlesex Square,  
Lincoln Playground.

Placed in the care of the Park Commission from the  
Lands and Buildings Department:

Franklin Square,  
Fayette Street Playground,  
City Hall and Memorial Building Grounds.

Land leased by the City and put into the care of  
the Park Commission:

River Bank on Varnum Avenue,  
River Bank on Colonial Avenue,  
A tract of land on Aiken Street.

The average annual appropriation for the care of  
parks since the appointment of the Commission has  
been \$13,054.40.

There has been a marked change in public sentiment  
with regard to the place and importance of parks as a  
feature of civic life. Parks are no longer regarded as  
luxuries to be obtained and maintained as show places  
merely. They are considered to be essential to the  
health and recreation of the inhabitants of the City and  
to the growth and development of a city, and in no small  
degree are considered to be a measure of its standing as  
a progressive community. In a different way, but only

in the difference of the way, parks are as essential to a city as are its fire houses and its system of sewerage. The fire department protects the property of the citizens, the sewer department provides for the disposition of the sewage in the interest of the public convenience and health. The parks and commons of a city minister to the health and enjoyment of the inhabitants of the city.

There is a difference in the use that may be made of the tracts of land that are dedicated for public use that are known by the generic name of parks. There is the common, consisting of a large level open space usually sown with grass seed, without artificial ornamentation, with seats and accommodations for resting or the playing of children, with possibly a space set apart for athletic sports such as baseball, tennis and other games. There are the small tracts of land, square or triangular in form, in different parts of a city used for the planting of shrubbery or simply sown with grass seed.

There is the tract of land that from its location and contour may appropriately be made a place for the display of flowers, shrubbery and trees with all of the accessories designed to make an attractive place to look upon. Fort Hill Park in this City is admirably adapted for a display park, the park to which visitors to the City are taken when its attractive places are being shown.

Shedd Park is an example of a tract of land large enough to permit of the display thereon of flowers and shrubbery, to provide a wading pool for the children, and for athletic grounds to afford the youth of both sexes the opportunity for healthful exercises. It is true that Shedd Park is located near to Fort Hill Park, but the use



LUCY LARCOM PARK, BORDERING ANNE STREET CANAL.



that it is intended to make of Shedd Park is different from the use that is made of Fort Hill Park, and it could be laid out and equipped in such a way as to make it to be used by persons from all parts of the City in the summer season, as it is now used in the winter for skating purposes. Shedd Park has been accepted by the City, and the thanks of the City Council have been tendered the donor.

Is it not the part of wisdom for the City from time to time to make appropriations for this Park with the view to its becoming, as was intended by the giver and the public, one of the best parks in New England? Would not such action encourage other public-spirited citizens in other parts of the City to give land for parks and playground purposes?

It may not be possible to have a display park in every part of the City, but it is possible now without a large outlay of money from time to time to acquire tracts of land in different parts of the City well adapted for parks and playground purposes. In many cities of the country much smaller in area than is the City of Lowell, park systems have been established more complete and more liberally supported than is our own.

## SOUTH COMMON.

The pond on the South Common becomes a nuisance in the summer by reason of the foul odor from it. The Commission renews the recommendation that the pond be made a wading pool for the children. If this change



were made the existing conditions that make the pond a cause of offence in the summer season would be removed and the children would have a means of enjoyment that would be appreciated by them in the heated season.

## PLAYGROUNDS.

The playground movement in this City under the supervision of the Park Commission began in the year 1905. At first there were no hired supervisors. Simple apparatus, consisting of swings, teeters, and other light apparatus were set up upon the South Common, North Common and on Chelmsford Street.

In the year 1906 supervisors were first employed by the City, and since that year playgrounds have been under paid supervision. From a humble beginning the playground movement in this City has grown with respect to the attendance of children on the playgrounds. There has been an increase of the apparatus on the playgrounds and an increase in the number of supervisors employed. The experience thus far had in this City with the playgrounds has made it certain that playgrounds have become an indispensable feature of its civic life. The attendance of the children has been large and constant. Many of the children attended the session on the playgrounds with the same regularity that they attended the school session; the parents of the young children have learned to appreciate the benefit to their children of having their leisure time in the long vacation pleasantly and profitably occupied, and the parents have had the satisfaction of knowing where their children were

and that they were out of the way of harm. The children are benefited physically and morally, and are kept under gentle and helpful influence and discipline that is a benefit to them in their home life and in their school life when the school term begins. The success of the playground movement is due largely to the intelligent, wisely directed and conscientious work of the supervisors of the playgrounds. This year the work of the supervisors was especially efficient. With one exception the supervisors were residents of Lowell. Many of them had experience in the work of former years; all of them rendered excellent service. The City appropriation was small in amount, and for a time it was believed by the Commission that the work would be seriously hampered and a fewer number of places made use of for playgrounds. Fortunately contributions were made by citizens in aid of the work on the playgrounds that helped materially in the work. The gift of one hundred dollars by the Trustees of the Caroline M. Hastings Charity Fund made it possible to open the Greenhalge schoolyard for a playground. The contributions made by Miss Martina A. Gage, by members of the Board of Trade, and others, were timely and liberal, and were almost indispensable in furnishing supplies for the playgrounds. As in past years the Middlesex Women's Club and the College Club gave valuable assistance for the furtherance of the playground work. The services of Miss Elizabeth C. Kennedy in aid of the playgrounds were invaluable. The secret of success in the playground movement is in keeping the children interested during the sessions and diversifying play with work. It is probable that with



more experience and with more means a special feature of the playgrounds will be the training of the boys and girls in industrial work. Children tire of play, and to make them helpful to themselves and to their associates, their attention must be kept occupied with work, under proper conditions.

The supervisors this year deserve the highest praise for the success of the industrial feature, especially with the girls. Mr. Redmond Welch, Chief of the Police of the City, gave staunch support to the Commission in keeping order on the playgrounds and in keeping away objectionable persons. The car rides and trips into the country were greatly enjoyed by the children, for which we extend our thanks to the Bay State Street R. R. Co., that generously provided the tickets.

## TREES.

The early settlers of the City had the taste and foresight to give especial attention to the planting of trees in the public streets and Commons. The result of their labors helped to make Lowell very attractive with respect to the number and variety of the trees growing on the streets and ways of the City. If this heritage of the City is to be preserved trees must be properly cared for and trees planted when a tree is removed or when new streets are opened.

This year an effort was made to ascertain the number and location of dead and dying trees in the City with the view to having them cut down as being a source of danger to the public. The Municipal Council gave an



RIVERBANK AT PAWTUCKET STREET AND BROADWAY STREET.



additional appropriation of three hundred dollars to aid in the work of the removal of dangerous trees. There have been 121 trees removed this season.

## SHEDD PARK.

Last year Shedd Park was flooded and put into condition for skating. During the skating season there were many heavy snow storms that caused considerable expense for the removal of the snow and for scraping the surface. The attendance when skating was good was very large, persons coming from all parts of the City to skate. The space is sufficiently large to permit of many skaters, and it has the element of safety, no small consideration, in favor of the use of this Park in preference to the rivers and ponds. The Commission acknowledges the aid it has received from the Water Department and from other departments of the City in providing the means for skating at this Park.

During the summer season Shedd Park has been used for baseball to an extent that forecasts the general use that will be made of the Park when it is completed.

## BILLBOARDS.

The crusade against billboards that was begun with vigor a year or two since has not been waged as vigorously as it was begun.

There is the disposition on the part of many land owners and lessees of land to be more mindful of the gain to themselves from letting space on their buildings or



lands than to be mindful of their duty as citizens to help to make the City attractive in its appearance.

It is difficult to maintain a continued interest in the crusade against offensive billboards until legislation in this State with respect to billboards is made more stringent.

## CONCLUSION.

Lowell is a large and growing city. It has a cosmopolitan population consisting in part of persons who work in the factories and shops in the City and suburbs. Hundreds of children live in the congested districts of the City with few or no opportunities for outings in the country, and from personal experience know nothing of what is known as taking a vacation. The commons and playgrounds minister to the physical and social needs of all classes in the community, but more especially are necessary for the health and recreation of those who toil and have no respite from their toil. It is worth while for the City to provide the means and agencies in a reasonable way that would tend to improve the health and thereby increase the usefulness of its citizens. The City Library serves to bring some knowledge of books and reading into many homes that would otherwise have little knowledge of either. Parks and playgrounds serve to provide the means for the public to obtain air and rest under orderly and healthful conditions. The Trustees of the City Library are doing a good work in awakening and keeping alive an interest in the reading of good books and in bringing the library to the homes of people in all sections of the City. The Park Commission is

making the effort to increase the number of breathing places and of playgrounds in the congested residential districts of the City, and to make more attractive and serviceable the parks and commons already owned by the City. The most potent means to obtain the best results from these agencies for good in a community, to improve civic conditions generally, is by the influence and effort of citizens who are fully alive to the importance of making the City a desirable place to live in and to do business in.

The appropriation for Parks was.....\$12,000.00

The appropriation for Playgrounds was.. 1,000.00

The appropriation for Care of Trees was.. 800.00

Mr. Charles A. Whittet, the Superintendent, has been intelligent and energetic in the discharge of the duties of his office.

Respectfully submitted,

JOHN J. PICKMAN,  
A. E. ROUNTREE,  
THALLES P. HALL,  
HENRY F. CARR,  
H. B. GREENE.









VIEW IN PROPOSED PARK AT WEST CENTRALVILLE.

# Financial Report

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LOWELL, MASS., December 31, 1912.

TO HIS HONOR THE MAYOR AND THE MUNICIPAL COUNCIL  
OF THE CITY OF LOWELL, MASSACHUSETTS.

*Gentlemen:—*

The Board of Park Commissioners have the honor to submit herewith the Tenth Annual Report of the Park Department of the City for the fiscal year ending December 31, 1912. In presenting you this report we have given a statement of the receipts and expenditures for the fiscal year, the financial condition of the several appropriations, the Superintendent's report to this department of the work and labor done in the Parks and Commons of this City.

Appropriation for Labor.....	\$9,000.00
Receipts for Labor .....	1.50

Total appropriation for labor.....	\$9,001.50
Expended for Labor .....	\$9,001.50

Balance .....	\$0,000.00
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Appropriation for "Other Expenses".....	\$3,000.00
Receipts .....	131.00

Total Appropriation for "Other Expenses".....	\$3,131.00
Expended for "Other Expenses".....	3,131.00

Balance .....	\$0,000.00
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We received from the rental of lots on the South Common on July 4th the sum of \$1,073.00, which was paid into the General Treasury Fund of the City.

# TO WHOM AND FOR WHAT MONEY WAS PAID OUT DURING THE YEAR.

To Whom	For What	Amount
The Lawler Printing Co.	printing	\$154.76
G. C. Prince & Son, Inc.	office supplies	30.10
T. J. McDonald	oats	75.32
John E. Drury	pipng	6.22
American Express Co.	express	.20
Courier-Citizen Co.	printing	3.50
Bartlett & Dow	tools and hardware	116.90
Whittet & Company	plants	161.80
George R. Morse	shoeing	23.50
New Eng. Tel. & Tel. Co.	telephone	39.18
Suffolk Engraving and Electro- typing Co.	half-tones	25.20
The American City	subscription	3.00
Donovan Harness Co.	blankets, robes, etc.	131.37
Doubleday, Page & Co.	subscriptions	9.50
Dumas & Co.	printing and binding	34.15
Wilder & Wotton	grain and hay	716.51
R. J. Haight	subscription	2.00
P. Conroy	manure	20.25
E. M. Kelly	manure	37.13
John J. Donnelly	shoeing	98.65
Harry C. Kittredge	stamp repairs	.50
Davis Printing Co.	printing	3.50
E. E. McCauslin	hay and grain	298.89
E. E. Hathaway	signs	1.00
Charles E. Walsh	ginger	1.44
Lowell Water Works Dept.	water, pipe and repairs	20.25
The Talbot Dyewood & Chemical Co.	sanitary fluid	3.20
The Thompson Hardware Co.	hardware	.08
F. E. Harris	loam	6.75
Morse & Beals	bulbs	131.77
Amasa Pratt Co.	lumber	4.76
Boston & Maine R. R.	freight	1.60
W. A. Sherman, V. S.	prof. services	1.50
J. T. Williamson	team repairs	13.75
The Bay State Nurseries	shrubs	179.24

To Whom	For What	Amount
The Adams Hardware & Paint Co.	paints and oils	4.15
The Lowell Electric Light Corp.	light	40.77
Davis & Sargent Lumber Co.	lumber	26.15
C. B. Coburn Co.	paints, oils and rope	17.85
The Staples Bros.	granolithic walks	243.16
Charles E. Gee	sharpening tools	25.15
Joseph Mullin	oats	96.64
The Moore Seed Co.	grass seed	20.75
The New Mineral Fertilizer Co.	fertilizer	17.00
The N. Y. N. H. & Hartford R. R.	freight	4.68
James Whittet	repairs	.25
Engineers' Dept.	services	37.50
J. B. Cover Co.	oats	68.68
E. A. Wilson & Co.	lime	2.25
Burnham & Davis	lumber	82.88
E. P. Bryant	carriage and cart repairs	59.52
J. H. Sparks	carriage hire	2.00
P. O'Hearn	sand	3.80
Suburban Life	subscription	3.10
Props. Locks & Canals Co.	lease	15.00
Chas. E. Galley	typewriter ribbons	2.25
Total		\$3,131.00

## LABOR AND SALARY PAY ROLL FROM JANUARY 1 TO DECEMBER 31, 1912.

January,	Pay rolls No. 1, 2, 3, 4,	\$ 359.63
February,	“ “ “ 5, 6, 7, 8,	270.24
March,	“ “ “ 9, 10, 11, 12, 13,	281.66
April,	“ “ “ 14, 15, 16, 17,	627.38
May,	“ “ “ 18, 19, 20, 21,	1,174.55
June,	“ “ “ 22, 23, 24, 25, 26,	1,430.44
July,	“ “ “ 27, 28, 29, 30,	1,109.75
August,	“ “ “ 31, 32, 33, 34, 35,	1,119.88
September,	“ “ “ 36, 37, 38, 39,	785.75
October,	“ “ “ 40, 41, 42, 43,	601.13
November,	“ “ “ 44, 45, 46, 47, 48,	708.49
December,	“ “ “ 49, 50, 51, 52,	532.60
Total		\$9,001.50



LOWELL, MASS., December 31, 1912.

TO HIS HONOR THE MAYOR AND THE MUNICIPAL COUNCIL  
OF THE CITY OF LOWELL, MASSACHUSETTS.

*Gentlemen:—*

We have the honor to submit to you the report of  
the expenditures of the Department of Parks of the Ap-  
propriation for Playgrounds.

Original Appropriation.....		\$1,000.00
Expended for Labor and Supervision.....	\$778.47	
Expended for Material and Supplies,.....	221.53	1,000.00
	-----	-----
Balance .....		\$1,000.00

TO WHOM AND FOR WHAT MONEY WAS PAID  
OUT DURING THE YEAR.

To Whom	For What	Amount
Bartlett & Dow	hardware	\$7.42
Cross Awning & Sign Co.	canvas and repairs	5.00
C. B. Coburn Co.	paint	1.05
F. G. Baldwin	paint	10.45
G. G. Read	beans	.18
The Thompson Hardware Co.	hardware	.63
Lands and Buildings Dept.	carpenter work	16.81
E. P. Bryant	bolts	.50
James Whittet	carpenter work	27.34
Napoleon Desmarais	pipng	2.50
Pratt & Forrest Co.	lumber	13.65
Dickerman & McQuade	bats, balls, etc.	91.99
P. O'Hearn	sand	3.40
John E. Drury	bibb	1.00
Lowell Water Works	pipe and labor	24.83
J. H. Sparks	carriage hire	3.00
Boutwell Bros., Inc.	chain and hooks	11.78
	-----	-----
Total		\$221.53

LOWELL, MASS., December 31, 1912.

TO HIS HONOR THE MAYOR AND THE MUNICIPAL COUNCIL  
OF THE CITY OF LOWELL, MASSACHUSETTS.

*Gentlemen:—*

We have the honor to submit to you the report of  
the expenditures of the Department of Parks of the Ap-  
propriation for Shedd Playground.

Balance of Appropriation from 1911...		\$2,092.07
Expended for Labor .....	\$1,533.79	
Expended for Material and Teaming.....	558.12	2,091.91
	-----	-----
Balance .....		\$0,000.16

TO WHOM AND FOR WHAT MONEY WAS PAID  
OUT DURING THE YEAR.

To Whom	For What	Amount
John Brady	teaming	\$65.04
Bartlett & Dow	tools	8.15
E. F. Hathaway	signs	4.00
New Eng. Tel. & Tel. Co.	telephone	.53
The Lowell Electric Light Corp.	light	52.76
Boston Engineers' Supply Co.	hose	296.75
Wilder & Wotton	salt	.63
J. T. Williamson	repairs	10.50
Boston & Lowell Express Co.	express	1.75
Lowell Co-operative Assoc.	manure	98.86
Robin Hill Nursery	shrubs	18.75
C. N. Rice	keys	.40
		-----
Total		\$558.12



LOWELL, MASS., December 31, 1912.

TO HIS HONOR THE MAYOR AND THE MUNICIPAL COUNCIL  
OF THE CITY OF LOWELL, MASSACHUSETTS.

*Gentlemen:—*

We have the honor to submit to you the report of  
the expenditures of the Department of Parks of the Ap-  
propriation for Care of Trees.

Original Appropriation .....	\$	500.00
Additional Appropriation .....		300.00
		<hr/>
Total Appropriation .....	\$	800.00
Expended for Labor.....	\$	606.09
Expended for Material and Supplies.....	193.91	800.00
		<hr/>
Balance .....	\$	000.00

TO WHOM AND FOR WHAT MONEY WAS PAID  
OUT DURING THE YEAR.

To Whom	For What	Amount
C. N. Rice	sharpening saws	6.30
Bartlett & Dow	tools and rope	\$50.05
John C. Bennett	rope	5.13
Donovan Harness Co.	belts	7.00
Park Dept.	team hire	64.00
J. H. Sparks	team hire	3.00
J. T. Williamson	iron work	.75
Lowell Gas Light Co.	tar and signs	7.21
Samuel P. Hadley	repairs	10.59
John Leclair	sharpening saws	17.15
Julius Parthum	repairs	12.10
E. P. Bryant	team repairs	.80
Cross Awning & Sign Co.	awning repairs	1.00
The Thompson Hardware Co.	hardware and glass	1.05
C. B. Coburn Co.	manilla rope	2.54
James Whittet	repairs	5.24
		<hr/>
Total		\$193.91

# MAINTENANCE.

Name	Labor	Materials	Total
North Common	\$ 876.51	\$ 13.89	\$ 903.40
South Common	1,553.52	54.91	1,648.93
Fort Hill Park	2,779.30	353.03	3,559.41
Belvidere Park,	110.74	5.50	121.90
Tyler Park	133.82		133.82
Mt. Vernon Park,	45.89		45.89
Monument Square	43.44	.08	49.19
Lincoln Square	2.92		2.92
Varnum Park	5.62		23.12
Penniman Park	8.64		8.64
Water Works Square	5.50		5.50
Shedd Playground	24.24	6.00	44.24
Hovey Square	4.60		4.60
Mansur Square	5.29		5.29
Coburn Park	36.50		36.50
Lenox Square	20.37		20.37
Franklin Square	10.34		41.83
Princeton Square	4.51	6.75	4.51
Middlesex Square	5.19		5.19
Lincoln Playground	90.22		91.72
Little Canada Playground	9.38		14.38
Varnum Avenue River-bank		5.00	27.19
Colonial Avenue River-bank			31.98

# IMPROVEMENT.

Name	Labor	Materials	Total
North Common	\$ 13.00		\$ 903.40
South Common	21.50	\$ 19.00	1,648.93
Fort Hill Park	253.75	173.33	3,559.41
Belvidere Park,		5.66	121.90
Tyler Park			133.82
Mt. Vernon Park,			45.89
Monument Square		5.67	49.19
Lincoln Square			2.92
Varnum Park	17.50		23.12
Penniman Park			8.64
Water Works Square			5.50
Shedd Playground	14.00		44.24
Hovey Square			4.60
Mansur Square			5.29
Coburn Park			36.50
Lenox Square			20.37
Franklin Square	24.74	6.75	41.83
Princeton Square			4.51
Middlesex Square			5.19
Lincoln Playground	1.50		91.72
Little Canada Playground			14.38
Varnum Avenue River-bank			27.19
Colonial Avenue River-bank			31.98

# MAINTENANCE.

Name	Labor	Materials
City Hall and Memorial Grounds	206.92	
Park Dept. Stable	752.99	
Workshop	43.26	1,690.28
Office Expenses	1,505.99	140.92
Hillside Park	3.70	289.57
Harris Oval	13.02	2.50
Parker-Spalding Park	6.00	
Lucy Larcom Park	39.65	
	<hr/>	<hr/>
	\$8,391.78	\$2,577.14

# IMPROVEMENT.

Labor	Materials	Total
258.23	341.45	806.60
		2,443.27
		184.18
		1,795.56
3.00	2.00	8.70
2.50		18.02
		6.00
		39.65
<hr/>	<hr/>	<hr/>
\$609.72	\$553.86	\$12,132.50



VIEW IN PROPOSED PARK AT WEST CENTRALVILLE.



# BALANCE SHEET, DECEMBER 31, 1912.

Dr.	Cr.
North Common, \$ 903.40	Appropriation, \$12,000.00
South Common, 1,648.93	Receipts, 132.50
Fort Hill Park, 3,559.41	
Belvidere Park 121.90	
Tyler Park, 133.82	
Mt. Vernon Park, 45.89	
Monument Square, 49.19	
Lincoln Square, 2.92	
Varnum Square, 23.12	
Penniman Square, 8.64	
Water Works Square, 5.50	
Shedd Playground, 44.24	
Hovey Square, 4.60	
Mansur Square, 5.29	
Coburn Park, 36.50	
Lenox Square, 20.37	
Franklin Square, 41.83	
Princeton Square, 4.51	
Lincoln Playground, 91.72	
Middlesex Square, 5.19	
Little Canada Playground, 14.38	
Hillside Park, 8.70	
Harris Oval, 18.02	
Parker-Spalding Square, 6.00	
Lucy Larcom Park, 39.65	
Varnum Ave. River-bank, 27.19	
Colonial Ave. River-bank, 31.98	
City Hall and Memorial	
Grounds, 806.60	
Park Dept. Stable, 2,443.27	
Workshop, 184.18	
Supt.'s Salary and Office	
Expenses, 1,795.56	
<hr/>	<hr/>
\$12,132.50	\$12,132.50



# General Superintendent's Report

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TO THE PARK COMMISSIONERS.

*Gentlemen:—*

I have the honor to present, for your consideration, my Tenth Annual Report of the maintenance and improvement of the parks during the year ending December 31, 1912.

I do not propose to go into any description of the parks or squares in the City, having covered them thoroughly in the past nine yearly reports, suffice to say that they all received careful attention throughout the year. The meagre appropriation this year would not permit of any extensive improvements.

The acquiring of outlying parks and reservations around our growing City should appeal to us all. And I desire to call your attention to a few of the many desirable places in our City for park purposes, the cost of acquiring which, at the present time, would be very small.

All over the country the people of the leading cities have become conscious of the importance of public parks and pleasure grounds, and that interest in recent years has assumed large proportions.

Today you will scarcely find a broad-minded man or



woman who knows the advantages of pleasure grounds for the people—the advantages derived from every standpoint by the proper cultivation and construction of such grounds—who does not believe that every city, town and even village should have a public park.

The population of our City has shown a large increase, and will probably continue to increase, and this increase is chiefly due to foreign immigration.

This great influx of population from foreign countries, comprised of every class and condition, from the best to the worst, much larger of the worst, in recent years, and a menace to good government, makes the problem of government in our cities one that demands the earnest attention of every educated patriotic citizen.

In every city among the best and worthiest there are men of foreign birth, of all nationalities and all religions, whose sympathy, services and means may always be relied upon for the maintenance of our free institutions, the honor of our country's flag and for honest government.

But we have to provide for the government and welfare of the masses, for wherever population is congested, in our City, there will inevitably be radical differences of social conditions, there will be the poor and the rich, the ignorant and the vicious, as well as the educated and virtuous, the unfortunate and the fortunate. We must comprehend and administer for the welfare of all. It is true that much has been done for the development of human progress, the soothing of popular discontent, and the promotion of sound physical conditions of city life. Yet there is a great deal more to do.

Generally those things which tend to make life brighter and the world more habitable are neglected until such time as their accomplishment or acquisition becomes more difficult than if considered at an earlier day. So the thought comes how may we improve those of our surroundings with which we are confronted in the course of our daily duties, in such manner that they may satisfy our natural tastes in different degrees according to previous association or education, and at the same time provide a stimulus to our higher appreciation of the aesthetic.

The commercial idea must be foremost in the building of cities, but the problem of bringing into harmony such formative work with the hills, valleys and woodlands, as well as with such bodies of water with which the city may be blessed, should not be ignored or forgotten.

The history of the older cities of the country shows a strange shortsightedness on the part of early officials. Not only were parks and necessary breathing spaces and recreative spots unconsidered, but even drainage, sewerage, and water supply were often planned with reference only to immediate wants and conditions, and the problem of rendering attractive and beautiful was made more difficult from year to year as improvements increased and became more permanent. The younger cities are awakening to a realizing sense of these conditions, and are profiting by the experience of their neighbors.

In our City there are opportunities of now acquiring wisely such lands as in a short time will be almost beyond our reach, both in the heart of the City, near the crowded



VIEW IN PROPOSED PARK AT WEST CENTRALVILLE.



centers of which there will inevitably be some, as well as in the farther outlying districts, where large tracts of forest and meadow may be acquired, thus giving country privileges to the residents of our City and within their easy access.

The time has now come when it behooves every one who can appreciate beauty in any of its myriad phases to become, if not an artist, at least art's patron. That the time is ripe is plain to the least observant. Attempts at outdoor art are everywhere, and the necessity for outdoor life impresses itself more and more upon our people. There needs but intelligent direction, and the ends we seek will soon reach full accomplishment.

The first step in any undertaking is the proper estimate of resources. What capital have we at our disposal? What material with which to build? To be more precise, it behooves us in the present problem of what may be termed park extension to inquire in every case what we have to start with, what Nature has done, what aid she can be relied upon to furnish. To such inquiry every locality offers, of course, a somewhat different answer. The park problem, as it offers itself to this community, has been, in a large measure, predetermined by Nature herself, and the very first thing, as it seems to me, that our people need to learn is how to use what they have.

Lowell includes an area of fourteen square miles. It is traversed by the Merrimack River, which flows eastward, and a large number of canals. Along every stream, in all parts of the City, are more or less opportunities for parks. All that is necessary to give us parks



forever is simply to set apart for the purpose a portion or portions of land bordering these streams which is really good for nothing else. The banks of the canals are being built upon, and the result is that, unless some means are taken to prevent it, within a very few years they will be stripped of their natural coverings, as has been done along Ford Street, and the primitive parks, the gifts of Nature, which should belong to and be enjoyed by the people of Lowell, will vanish forever away.

I would urge and recommend that measures be taken to preserve for the people the only resorts they have, the gifts of Providence and Nature, admirable in themselves, susceptible of indefinite improvement and competent, if undisturbed, to perpetuate themselves a joy forever.

Moved by what we esteem right considerations, some of us who perceive the necessities of the case should urge the people of Lowell to reserve for themselves some, at least, of the choicer wooded regions of the suburbs of our City as rural parks. The people must act, they will act some day, will they act in time? The axe is swift, the people are so slow.

But, it is urged, that it is impracticable or impossible to secure these lands. Perhaps so; nevertheless, something must be done if we are to reserve these natural breathing spots for the recreation and refreshment of weary humanity. And it has been found practicable everywhere when men earnestly undertake the work. The most hopeful mode of procedure is to persuade the city authorities to act, to purchase and hold in the name of the people, and for rational use, suitable lands wherever obtainable.

The problem goes deep, it touches, I believe, the very perpetuity of our institutions. No man can love an un-beautiful land. No civilized people can long remain content when all vestige of natural beauty has been removed from sight, nor can a free government rest upon an unhappy or discontented people. If we wish our own people to most speedily reach the maximum of contented peace we shall exert ourselves to preserve to our God-given heritage its original, wonderful features of surpassing natural beauty.

The desirability of securing the Livingston land for a park has been for a long time realized and prominently brought to the attention of the public. If it is to be secured in its entirety haste is necessary, as streets and houses have already begun encroachments. For its acquirement, protection, care and development as a park the united efforts of our citizens are necessary. What is true of this piece of land is equally true of that strip of ground lying west of Aiken Street Bridge and south of Lakeview Avenue, bordering the Merrimack River and Beaver Brook. It is easy of access, and the nearest example of a natural park in the City, and it is in a crowded tenement section.

If the people of Lowell care to possess in common a park such as any city would be proud to call its own, a public forest possessed of vastly finer scenery than in any of our parks, a recreation ground far surpassing in its refreshing value in this vicinity, they have only to possess themselves of the still cheap lands of which I speak.

Another strip of ground of which I may be permitted



to call your attention to is that bordering the Merrimack River between Aiken Street and Bridge Street and on the southerly side of Lakeview Avenue, here is an opportunity to have one of the finest waterway parks in New England. The importance of both these parcels is very great as a recreation ground for the large population in its immediate neighborhood.

Another region possessed of great natural beauty is that strip of ground bordering the southerly side of the Merrimack River and north of Middlesex Street, from the Gage ice houses to North Chelmsford.

I would draw your attention to another beauty spot bordering the canal north of Pawtucket Street between this street and Broadway.

The banks of the Concord River between Andover Street and Rogers Street merit attention. With the island in the center of the river there are few finer bits of scenery in the City.

The land on the northerly side of the Merrimack River and bordering First Street down to and including what is known as Indian Orchard and the easterly side bordering Stackpole Street, although small in area, there is within their limits a park-like region of extraordinary beauty. The varieties of scenery in these tracts, in part wild, wooded and rocky, and in part open, give a charm to the locality that is unsurpassed.

The appropriation of an average of \$13,054.40 per year for park work is utterly inadequate for their need. The appropriation for parks in the past has been meagre and uncertain, and some steps should be taken to have a stated sum for park work.



VIEW OF RIVERBANK AT HUNT'S FALLS, LOOKING SOUTHEAST.



This City has quite a number of small parks and squares. Almost every one of them is now a spot of beauty. Our larger parks are capable of many improvements and are far from being complete. The drift of time and circumstance in this age seems to be provocative of harder conditions for the working classes of our City. If these are to enjoy the relaxation and recreation to which they are justly entitled, but which their restricted means can ill afford, it can be brought about in no way more productive of good results, in no way more thoroughly diffusive, than with public parks as the instrument.

Organized effort in many directions is necessary to secure it, and if our work is to count it should be strong and effective in proportion to our City.

We are in a city of more than one hundred thousand people, a city of great industries, of great commercial enterprises. No city should be more interested in her public schools, churches, public library, in public parks and parkways, and all those things which make stronger men and women, build character, and educate them for a better life, than the City of Lowell. Yet we have comparatively few in our community who have given their time and talents to outdoor art improvement for the public good, a work that is of great value to the present generation, and of inestimable value to the generations which will succeed us. To instruct and assist people in the development of outdoor art will elevate and bring enjoyment and sanitary improvement to our City. I know and feel that there is a mission for us, and that all the good people of our City should unite to foster and

perpetuate this idea. There is no grander work lies before any set of men than to develop the wonderful opportunities which lie right at our door. The most charming form of beauty which can be found anywhere is that which is found outdoors. The people of our City do not realize what a priceless inheritance Nature has given them.

As a business man, I do not know of any better investment about our City or in our City than the investment in the lands which are dedicated to park use, not only for men, but for women and children, and not only for this generation, but for the generations to come.

One way in which we could improve the appearance of our City would be in passing an ordinance that would oblige every man to set his house a certain distance from the street line, and that there must be nothing in front of the houses—such streets would be the pride and admiration of every man, woman and child living in that neighborhood, and they would take as much pride in them as in the parks we have.

This idea of broad vistas, park-like lawns stretching two or more miles, has been adopted in some of our cities, and I think it is one of the most important factors in the beautifying of a city.

It is easily seen that money and labor expended in beautifying parks and improvements of streets by planting trees and grass wherever possible, and in beautifying the homes of the people, is well and wisely expended, and is productive of more good to a community than can be secured in any other manner.

There is a widespread public sentiment making itself



felt in favor of the improvement of home surroundings, streets, school grounds and parks. The cultivation of good taste in flowers not only brings pleasure to men, but changes their character and habits of thought and action. Bleak surroundings, filth and lack of interest make the home life unhappy and dwarf all good ambitions.

The great problems of our day are those of city life, with its crowding and herding in dark places. Tenement houses, with all their attendant evils, give the serious turn to every city. Whatever assists in brightening the lives of working people, whether in large cities or small, has a distinct value to the world in which we live. The encouragement of working men to live away from the crowded districts is one of the duties of our time. And if these residents can be encouraged to an active interest in beautifying the immediate surroundings of themselves and their neighbors, a distinct step will have been taken toward the attainment of one accomplishment.

It is no reflection upon the value of parks or public gardens to say that the surest and best method of improving the condition of the masses is to encourage home planting and cultivation of vines and flowers even in the small dooryards of the crowded streets. The grounds surrounding the factories in our City could be beautified in a simple but effective way, by the cultivation of lawns and the planting of shrubbery and vines, using only such plants as easily grow in this climate.

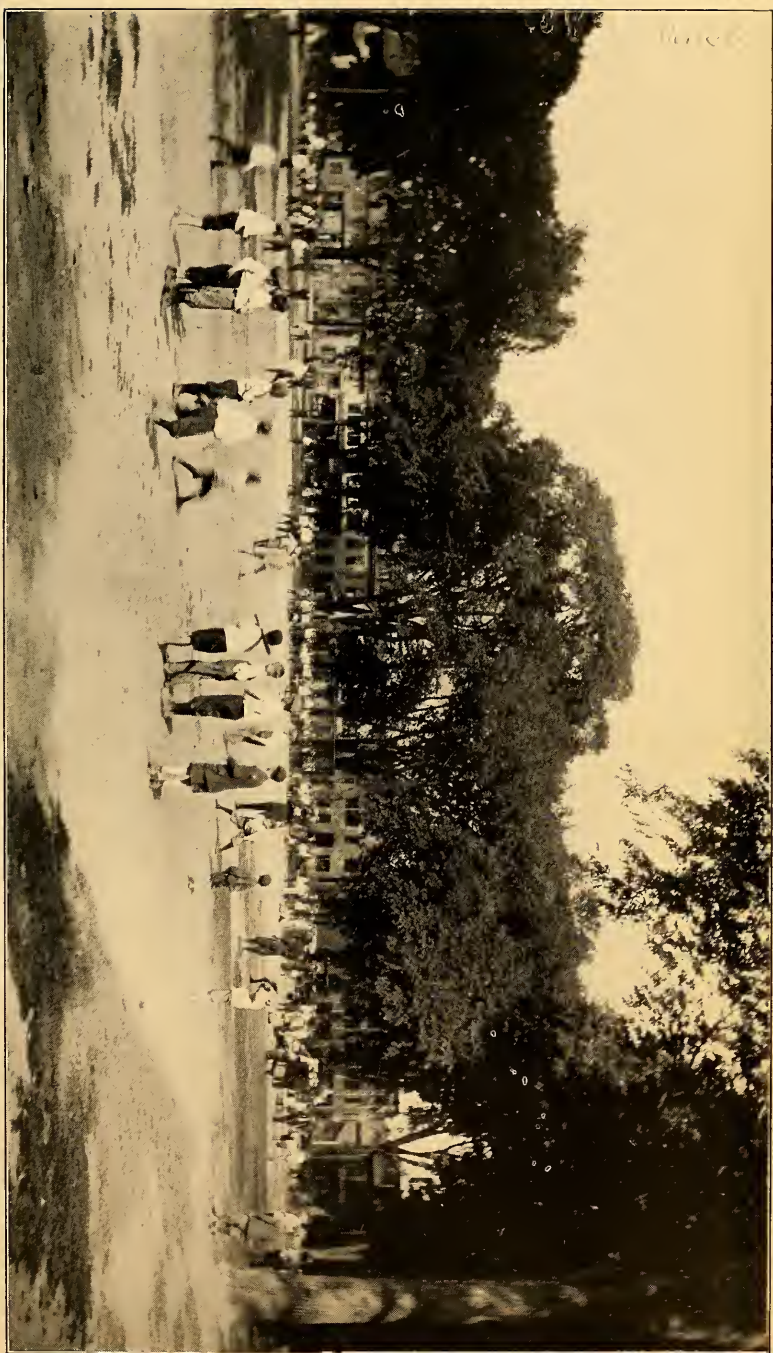
Those in authority over schools and parks should not fail to establish a botanical garden, even though small, in which many leading native and exotic plants shall each be represented by a good specimen, accurately labeled, in

order that all citizens may, if so inclined, make comparisons and take notes of their favorites at all seasons of the year.

The sentiment for increased park area is growing, and we have some notable instances of such increase during the past year, especially is this the case in our larger cities. Both Chicago and New York have purchased a number of small squares in the more densely-populated portions of the city for "breathing places," which are now conceded to be necessary to the health and comfort of the inhabitants of crowded districts as are other sanitary measures. In many cities playgrounds have been established where children of the streets have been gathered and placed under the care of competent teachers who soon win their love and respect. Mothers who have seen better days, and whom circumstances have forced to live in neighborhoods where their children were surrounded by the worst elements in social life, call down blessings upon the heads of the promoters of this great work. Faces grown prematurely old soon take on youthful expressions, and the swings and dolls, the games and sand-heaps, are thoroughly enjoyed. The children's playground should be made the kindergarten of outdoor art.

What we need in Lowell is a City Improvement Commission whose duty it should be to prepare a comprehensive plan for the development of the City, anticipating its future growth for many years to come, in order that improvements of every kind should proceed along definite lines and form parts of a well-defined and consistent scheme.





ATHLETIC FIELD ON THE SOUTH COMMON.



The cities that work without such a plan spend their money to no effect. It often happens even with ourselves that one city official will go to great expense to undo what some predecessor accomplished at equal expense. Thus we find that lack of system is costly, and that without it there are many loose ends that go to waste. The money laid out in developing a well-devised plan of improvement is not thrown away. Little by little the results appear, and in the end the city will have reason to be proud of the finished design. When a board of architects, landscape gardeners and engineers go to work to devise public improvements with a view to beautifying the city they can lay out a plan of what the city should be. Then let the city take up this plan and work slowly, it may be, but nevertheless steadily, in that direction. This is the way in which some of the most beautiful cities in this country became the models that they are. It is a wholesome and salutary thing to keep before the government of a city some plan of public improvement sufficient to inspire them to heroic effort in the right direction.

### BILLBOARDS.

Among the matters for consideration is the growing nuisance of the huge advertising billboard, which deserves attention. Were it not so temporary in character and so certain to be abolished as soon as an aroused public shall demand it, it might be considered a matter of great moment, as indeed it is for the time being. The desecration of rock and cliff and forest by the advertising fiend would seem to have reached almost the limit of

endurance, were it not that those who suffer consider themselves so helpless in the matter. In this state a law has been passed, the enforcement of which will materially modify the disfigurement of roads. In nine cases out of ten no authority exists or is given for advertisements upon public highways and properties, and the good citizen is in duty bound to see that the offender removes the offense or is prosecuted.

The billboards in this City are increasing in numbers, hideous signboards of all shapes, hues, sizes and description deface buildings and distract the eye from whatever architectural merit the street may possess. The question as to the legal remedy for this abuse is a difficult one.

The regulation of the advertising signs might be attempted on any one of several grounds, for instance, through a clause in the building regulations of the city, prohibiting the erection and location of wooden signs or billboards, on the ground of the danger of spreading fire, or they might be reduced in number by a high license fee. The first thing to do is to find out how much the public desires relief, as success in this movement must depend upon the desire of the public to be relieved. The next thing is to give clear and forcible expression to that desire and to direct it toward the best means of accomplishing its object by joining together and expressing the sentiment which now exists very generally in an unorganized and unvoiced manner.

Tyron, South Carolina, a place of rare beauty of location, surrounded by some of the great mountain ranges of Western Carolina, permits no billposting, nor painting on the rocks within the city limits.

## PLAYGROUNDS.

It was Phillips Brooks who said: "He who helps a child helps humanity with a distinctness, with an immediateness, which no other help given to human creatures in any other stage of their life can possibly give again."

The children need some place to play, have we supplied the necessary number of places? If not we should make provision at once for playgrounds, lest suitable sites be obtained only at immense cost. Close supervision of playgrounds is necessary, otherwise they fall into disfavor and the hands of rowdies.

Public-spirited persons should bear in mind that there is no gift to the city of greater use and enjoyment, with more lasting honor to the name of the donor, than a public playground. And no public money is more profitably invested than that spent for playgrounds, even when costly land in a densely-populated district has to be taken. Play is essential to the healthy development of children and youth. The future of the growing generations depends upon it. Playgrounds save children from evil influences and criminal association. When we consider the waste and destruction represented by every person who resorts to vice and crime, we may gain some idea of the economical returns from playground investments in promoting social welfare and averting evils otherwise inevitable.

Jacob Riis says: "A steam boiler has its safety valve and a boy has his. You can sit on the safety valve of a steam boiler if you choose, but you are an awful fool if you do." But what else have we been doing until quite recently but sitting on the safety valve of the boy? The



boy's safety valve is his play. Sit on that, hold him down hard, and you will have trouble. Give him the gutter for a playground and nothing else, and you will have crime as a matter of course.

The popularity of the municipal playgrounds during the past summer was greater than ever, and the interest and appreciation of the patrons is continually increasing. Five playgrounds have been in operation, and the large attendance at each indicates there is no lack of patronage.

The playgrounds were open from 9 a. m. until 5 p. m.

All of the grounds were equipped with swings, slides, see-saws, basketball courts, volley ball courts, and the larger ones with outdoor gymnasias, running tracks, baseball fields, etc.

The playgrounds were in charge of trained supervisors, young men and women whose business it was to lead in the games and direct the play. They were carefully chosen on the basis of their playground experience and special training in playground work.

Among the boys the team spirit was fostered and stimulated in every manner because of the immense educational value of group play in developing cooperation, co-ordination, loyalty, self-denial and many other commendable qualities so essential to the development of strong character and the making of good citizens. Baseball was the most popular game, it is a game which every healthy boy loves to play.

The activities of the girls were divided between organized games and teaching raffia weaving and sewing.



PLAYGROUND EXERCISES ON THE SOUTH COMMON PLAYGROUND.





Games and exercises were indulged in during the cool hours of the day, and the hot periods were spent in passive play, story telling, weaving and sewing. The raw material was furnished gratis and the girls worked the same into fancy and useful articles, which they were permitted to keep after placing the same on exhibition during the field day exercises at the close of the season.

Children too young to participate in the strenuous games and exercises were not neglected, they were directed to the sand boxes or simple apparatus set aside for their exclusive use, where they amused themselves without danger of injury.

Particular care was taken to protect the children from personal injury. The apparatus was inspected and tested regularly, and every precaution was used to reduce the danger of injury to the minimum. Not a single injury occurred that could be attributed to defective apparatus. The accidents that occurred were of a minor nature and were caused by the carelessness and recklessness of the children. The supervisors were familiar with first aid treatment. Medical material was always kept at hand, and whenever an injury occurred it received prompt attention.

Playgrounds should be established in every ward in our City. When the rulers of our City realize the truth of this, there will be a decrease in crime and in the death rate, and an improvement in the moral and physical condition of youth.

“The men and women who are to build the fairer city of to-morrow must learn self-government by playing together as boys and girls on the playgrounds of the city of to-day.”

## CARE OF TREES.

There is little need of singing the praises of trees, which, with grass, may be said to constitute the chief materials of the city beautiful. Yet we do not always reflect how absolutely dependent ordinary scenery is upon trees.

It may be rightly asserted that the beauty of a city is wholly dependent upon its trees, but if the trees were removed there would be small claim to beauty. Picture to yourself a city destitute of trees, can you conceive of its being attractive and beautiful for the abode of man?

We should start and plant trees in our City, and if we are to plant trees in our City, it should be done with intelligent and careful consideration and not at random. First find out what trees do best in our City. It is greatly preferable to use trees that are either indigenous or have been sufficiently tested to ensure that they will be successful.

The next matter of importance is to see that, if you are to plant whole streets at a time, they are planted all in the same kind of tree, and not hit or miss. Washington is a conspicuous example of how well tree planting can be managed, for there are great avenues with pin oaks, and others with sycamores, and others with tulips and others with elms, but on no street has there been permitted a heterogeneous mixture.

It is important to see that the trees are not planted too closely. Long-lived trees need room to develop. The small trees which are generally planted at the proper distance look very lonesome when planted at the proper

distance apart, but they will grow all the better for having room to grow.

In respect to the varieties of trees, let me suggest a consideration of the pin oak, the red oak, the American sycamore, the English sycamore, the tulip tree, the hard or sugar maple, the red maple, and possibly the Norway maple and the sycamore maple. The white ash may be useful and is long-lived.

As to protecting the trees from boys, the best way is to teach the boys to love the trees by showing and giving them pictures of good trees in our schools and giving them information about trees. There ought to be no difficulty whatever in securing the enthusiastic assistance of the boys.

As to the trimming, it must be absolutely restricted if you are to have good trees. If the trees come to you in a fair order with a good root system, they will need the cutting off of all mutilated roots and a reasonable shortening in of the upper branches to a symmetrical shape, cutting in each case close to a bud, smoothly. If they are then planted in large holes, carefully dug, and each tree surrounded by some good soil without any fresh manure, they should live and grow and require no other trimming for many years, save rubbing off, as soon as they appear, buds and shoots on the lower part of the trunk.

Young trees must be staked if they are to do well. If you will plant with the tree a good solid hardwood stick, say 2in. x 4in., driving it firmly into the ground after the hole is dug, so that it is substantially planted, and will fasten the tree to this by a band of leather, or old hose, or

strong soft cloth, which is crossed between the tree and the stake, tacked on the back of the stake, the trees will be well protected while they are re-fastening themselves with a new root stem. The fastening of the tree to the stake is of the utmost importance, as if it is tightly bound to the stake it will chafe and hurt itself, but if it is held by the strap above described, which is looped around the tree and then crossed before the strap passes around the post, it will be in a sling and cannot damage itself.

Trees may be ranked among the noblest products of Nature, and by many they are so valued, but there are others who may be classed among the enemies of trees, for the enemies of the trees are not confined to insects. The greatest mutilation of street trees is done by the hand or through the negligence of man.

Trees would have an additional value in the eyes of the people were an interest displayed by public officials in their care and protection.

An examination of the trees in the streets of our City will show that one-half are injured by the gnawing of horses, one-third are injured by the employees of corporations in the stringing of wires for lighting and other purposes, others are injured by contractors who seldom hesitate to use a convenient tree as a guy post. Municipal employees are generally careless of the well-being of street trees, in fact they will cut the roots or branches from a tree unnecessarily.

The greater part of this destruction is caused by lack of knowledge or appreciation on the part of the employers of labor and public officers of the value of trees to a city.





SLIDE ON THE NORTH COMMON PLAYGROUND.





In a measure, Lowell recognizes its obligation to the trees on its public streets. The recognition is so slight, however, that the most crude attention only can be given to their wants.

Lowell is not parsimonious in its appropriation for some of her public works. Why, then, should it neglect a matter of such importance as the care of its shade trees, when their care stands for so much that is beautiful and of advantage to the city?

The trouble lies largely in the lack of knowledge, of the lack of attention given to the subject by the governing powers. Were the same intelligent interest taken in the matter of its trees that is given to some of the other public works, every street in Lowell suitable for the purpose would be planted with trees, and provision made for their care. Then instead of misshapen, sickly and mutilated trees that we see on every hand, all would be equally beautiful and contributing to the general effect.

Only scattered attempts have been made to combat the various insect pests, of which there are a number. The worst of these, and the one most in evidence to the general public, is the elm leaf beetle. It is a pest of the most pernicious kind, and will, without doubt, work great destruction if not controlled or destroyed. The intelligence and energy of the Municipal Council cannot be better employed in the interest of Lowell's shade trees than by directing both against this destructive insect. Irregular circular holes occurring in the leaves of elms, followed by skeletonizing of the under surface of the foliage by the grubs and subsequent browning of the remaining tissues, are very characteristic features of this

insect's presence. This imported insect is responsible for more ruined elm trees than all the other destructive agencies combined. It probably established itself in this country about 1834.

The defoliation of a tree in midsummer is a serious injury, since the leaves are breathing organs, and if this occurs for successive years, even once a season, the early death of the elm may be expected, and when it occurs two or even three times in a summer it is easy to see that the danger to the trees is increased manifold.

The time to control this pest is not after it has become enormously abundant and has seriously weakened or nearly destroyed the majority of the elms, the work should be begun at the outset and the insect prevented from establishing itself in large numbers in any uninfested city or town. Public-spirited individuals interested in the welfare of a community where this beetle occurs would do well to undertake at least an educational campaign against it.

The transformations of this insect are so rapid that a man must know what to expect, or in fighting the pest he will accomplish practically nothing, because a substance effective against the beetles or grubs may not kill the pupæ, and, after the larvæ have begun to descend the trees, may be of no value.

Many have thought that in the course of a few years some natural agent might reduce this grievous pest to comparatively harmless numbers. This can hardly be expected for some time, at least, because the beetle is still very injurious in localities where it has been for many years.

It is practically impossible to get at the insect while it is hibernating, but if the leaves are thoroughly sprayed with an arsenical poison early in the spring, when the beetles begin to feed, many of them will be poisoned. This insect is not inclined to fly any great distance, and this should be encouraging to the parties who protect their own trees, since it reduces the liability of their flying from neglected trees near at hand. The local spread of this beetle is slow, and the most should be made of it by keeping the pest in check wherever it occurs, even though the infestation be a small one and the injury at the time of little importance. It is a mistake on the part of local authorities to wait till the creatures become destructive. It should be fought at the very beginning, before it has secured a fair foothold in a locality.

The full-grown larvæ crawl down the trunks in great numbers and the golden yellow pupæ may be found in abundance in crevices in the bark and on the ground about the trees. Large numbers of these insects can be killed at this time by spraying them with a contact insecticide, such as kerosene emulsion, whale oil soap solution or by pouring boiling water on them. In order to secure the best results the grubs and pupæ should be destroyed every five days so long as the pests are seen in numbers.

Another insect which is very prolific is the Cottony Maple Scale. This pest, inconspicuous earlier in the season, most often comes to notice after the females have attained their full growth late in June, or early in July and have execrated an abundant cottonlike substance which protrudes from under the scale covering

the insect. The entire under surface of limbs is frequently covered with these insects with their cottony fibers full of minute eggs and young.

Brushing with a stiff broom will dislodge many insects. This should be done before the young scatter, and would be more effective if the brush were dipped frequently in kerosene emulsion or other insecticide. This pest can be fought with a great deal of success by washing it from the tree with a stream from a hose.

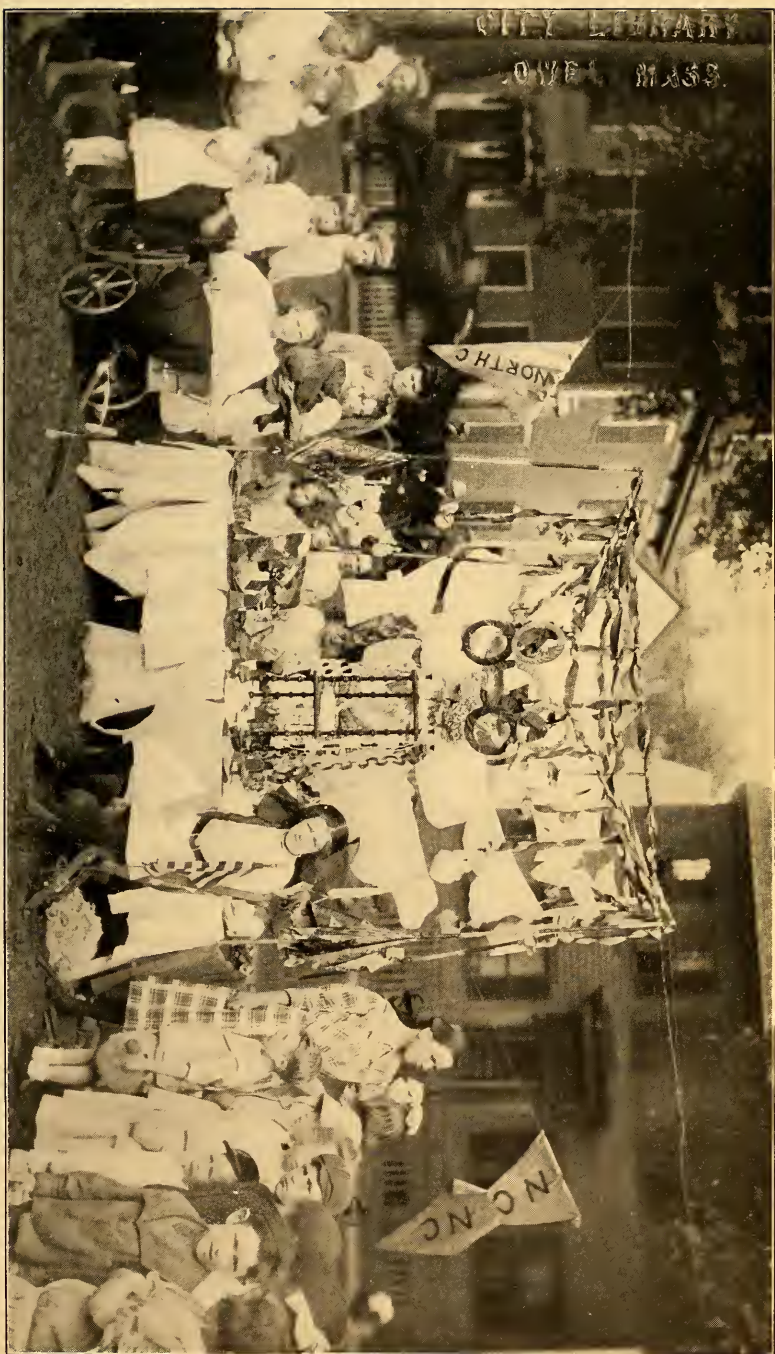
There are various other insects and scales which attack the trees, such as the Brown-tail and Gypsy Moths, the Oyster Scale, the San Jose Scale, the Tussock Moth and many others.

If the members of the City government would provide funds for the planting of trees in the residential section of the City, and would give more attention to the uprearing of the noble trees and the care of them, they would be conferring a blessing upon the residents of the City, and would be remembered with pleasure by those who follow them as having done something that was not entirely selfish.

Do any of them know, and if they know, do they stop to consider the great benefit trees have upon the health of the human beings living near them, of the great quantities of carbon and other poisonous matter consumed by a tree, and of the oxygen, the life-giving element, given off by these same trees?

We do not lack for laws for the protection of shade trees, all that is necessary is to enforce the existing laws without fear or favor. And we may all do our part toward educating the general public to a feeling of per-





INDUSTRIAL WORK AT THE NORTH COMMON PLAYGROUND.



VARIOUS APPROPRIATIONS RECEIVED AND EXPENDED UNDER THE DIRECTION OF THE COMMITTEE ON COMMONS  
FROM JANUARY, 1894, TO MAY, 1903, 9 YEARS AND 4 MONTHS.

Year	Regular Appropriation	Receipts and Transfers	Total Appropriation Expended	Expended for Maintenance	Expended for Improvement	Balance to General Treasury	Special Appropriations	Balance Special Appro. returned to General Treasury	Rental of Lots, on South Common July 4th
1894 ..	13,000.00	753.85	13,753.85	13,753.85			70,210.29	Extension of Fort Hill Park: Paid to E. A. Smith and F. B. Shedd for land	442.50
1895 ..	10,000.00	3,633.04	13,633.04	13,633.04					324.50
1896 ..	10,000.00	2,093.64	12,093.64	12,093.64					909.00
1897 ..	12,500.00	84.75	12,542.55	12,542.55		42.20			812.00
1898 ..	10,000.00	421.81	10,421.81	10,421.81			3,000.00	Improvement at Fort Hill Park	287.00
*1899 ..	12,000.00	160.15	11,786.26	9,272.59	2,513.67	373.89			845.00
1900 ..	12,734.53	90.12	12,639.13	12,639.13		185.52	500.00	Repairing walks on Commons	584.40
							3,100.00	Improvement at Fort Hill Park	
1901 ..	11,046.30	320.00	11,366.30	11,366.30			350.00	Repairing walks on North Common	685.25
							2,500.00	Improvement at Fort Hill Park	
							500.00	Shrubs, bulbs, trees, etc., at Fort Hill Park	
1902 ..	11,025.00	666.13	11,389.21	11,389.21		301.92	5,000.00	Improvement at Fort Hill Park	818.00
1903 ..	3,346.10		3,346.10	3,346.10					
	\$105,651.93	\$8,223.49	\$112,971.89	\$110,458.22	\$2,513.67	\$ 903.53	\$81,810.29	\$297.25	\$5,707.65

VARIOUS APPROPRIATIONS RECEIVED BY THE PARK COMMISSIONERS AND EXPENDED UNDER THEIR DIRECTION  
FROM MAY, 1903, TO DECEMBER, 1912, 9 YEARS AND 8 MONTHS.

Year	Regular Appropriation	Receipts and Transfers	Total Appropriation Expended	Expended for Maintenance	Expended for Improvement	Balance to General Treasury	Special Appropriations	Balance Special Appro. returned to General Treasury	Rental of Lots, on South Common, July 4th
*1903	6,653.90	57.99	6,711.89	6,711.89		5.77			481.00
*1904 ..	12,000.00	95.97	12,095.86	8,416.60	3,679.26	.11			1,072.00
*1905 ..	12,544.00	227.30	12,771.20	7,941.32	4,829.88	.10			1,120.00
*1906 ..	15,000.00	159.75	15,149.68	10,913.08	4,326.60	10.07			1,111.00
*1907 ..	12,000.00	277.00	12,277.00	9,183.70	3,093.30				1,031.00
*1908 ..	14,000.00	566.00	14,565.98	10,154.35	4,411.63	.02	50.00	North Common Drinking Fountain	1,136.00
							3,500.00	Improvement, Monument Square	
*1909 ..	15,000.00	48.77	15,048.50	8,792.67	6,255.83	.27	2,000.00	Little Canada Park and Playground	1,084.00
							1,000.00	New Baseball Grounds, Fort Hill Park	
							1,500.00	Anne Street Ornamental Grounds	
*1910 ..	14,000.00	178.65	14,178.65	9,453.03	4,725.62		100.00	Little Canada Drinking Fountain	1,087.00
							3,000.00	Little Canada Park and Playground	
							2,050.00	North Common Drainage System	
							300.00	North Common Drinking Fountain	
							1,000.00	Fort Hill Baseball Grounds	
							500.00	Improvement of School Grounds	
							1,000.00	Repairing walks on North Common	
							1,200.00	Anne Street Ornamental Grounds	
							10,000.00	Shedd Playground	
*1911 ..	14,000.00	314.33	14,314.33	9,713.24	4,601.09		100.00	Little Canada Water Piping	1,136.00
							500.00	Repairing School Grounds	
							1,000.00	Lucy Lareom Park	
							10,000.00	Shedd Playground	
*1912 ..	12,000.00	132.50	12,132.50	10,968.92	1,163.58				1,073.00
	\$127,197.90	\$2,058.26	\$117,245.59	\$92,248.50	\$37,086.79	\$ 16.34	\$38,800.00	\$3,576.16	10,331.00

\* Charles A. Whittet, Superintendent.





sonal proprietorship in all street trees, to the end that they may feel no compunctions in making complaint to the proper officials of all offenders against the law, even though it be a neighbor, thus by punishment educating the ignorant and creating in the malicious a wholesome respect for the law.

It may be of interest to know how many meetings have been held and how attended by the members since the Board of Park Commissioners assumed office.

Name	Time of Service	Meetings Held	Meetings Absent
Commissioner Pickman,	May 4, 1903-Dec. 31, 1912.	171	5
“ Drury,	May 4, 1903-May 1, 1912....	160	15
“ Parker,	May 4, 1903-June 5, 1912..	136	43
“ Hall,	May 4, 1903-Dec. 31, 1912....	171	8
“ Greene,	May 4, 1903-Dec. 31, 1912..	171	56
“ Carr,	July 5, 1911-Dec. 31, 1912....	24	8
“ Rountree,	Aug. 5, 1912-Dec. 31, 1912.	8	1

Accompanying this report is a comparison of the amount of money expended by the Committee on Commons ten years previous to the Park Commission assuming control of the parks, and ten years since the Commission assumed control.

In closing my report I wish to express to the members of the Board of Park Commissioners my fullest appreciation for their support and good will, and wish to thank the employees of the department for the efficient service rendered, making it possible to accomplish all that has been done.

Respectfully submitted,

CHARLES A. WHITTET,

*General Superintendent.*

## STATEMENT OF PLAYGROUND WORK FOR 1912

BY THE MIDDLESEX WOMEN'S AND COLLEGE CLUBS.

At the beginning of the year 1912, the outlook for continuing the work of the playgrounds in this city was very uncertain. The Municipal Council had failed to appropriate any money for that purpose, and there seemed little likelihood that an appropriation would be made later.

As the members of the Middlesex Women's Club and the College Club had supported the movement heartily in the past, the members felt very much disheartened at the prospect. They felt that this work was of too much importance to the children of our city to allow it to drop without a protest.

A joint meeting of the committee from both clubs was called, ways and means were discussed, but no method of raising enough money to carry on the work even in a small way, seemed feasible. It was finally decided that a committee of four, consisting of Mrs. Joseph Nesmith, Mrs. John H. Lambert, Miss Winifred C. Haggerty and Miss Elizabeth C. Kennedy, should visit the five members of the Municipal Council and lay before them the importance of the playground work, with the hope that some means might be found by which an appropriation could be made.

As a result of their appeal an appropriation of \$1000.00 was made, this sum to be expended under the direction of the Park Commissioners.



CHILDREN AT LITTLE CANADA PLAYGROUND.



Only those closely connected with the work realize how much time, anxious thought and planning were required in order to get for the children the greatest amount of good for the smallest possible outlay. That marvellous results were accomplished with little money is due to that thought and foresight.

The \$400.00, provided by the Middlesex Women's Club, paid practically the entire expenses of the maintenance of the Paige Street Playground, the maintenance of the shower baths in the basement of the Eliot School on alternate half days for the boys and girls, with an attendant in charge all of the time, for a supervisor and two assistants at the Greenhalge School Playground, for an extra assistant at the South Common, and about \$40.00 spent for material for industrial work. As the playground season lasted eight weeks it may readily be seen that a great deal was accomplished for a very small outlay.

The College Club agreed to be responsible for the salary of an experienced French-speaking supervisor for the Little Canada Playground, and Miss Regina Frappier was employed by them. We cannot speak too highly of the work done on this playground by her and her assistants. This is one of the most trying playgrounds in the city, yet the work done by the girls here is of the very best, and the interest manifested by them in their work is exceedingly laudable. At all times the children were interested and anxious to learn, as the result of their work on the closing day plainly showed.

Miss Catherine Tobin on the South Common, Miss Helen Hurd at the Greenhalge School, Miss Grace



McAllister on the North Common, and Miss Mabel Haggerty at Paige Street are to be highly commended for faithful service.

In the early part of the year, it was determined by the members of the Middlesex Women's Club that if they could do but one thing for the children of the playgrounds, that one thing should be the maintenance of the shower baths. No arguments are necessary to prove the beneficent influence of cleanliness. It is to be hoped that the time is not far distant when public shower baths will be installed in every section of the City. The matron in charge of the girls reported that there were always from seventy-five to a hundred girls present every half-day, and very often many more than that number, in fact, at times, the rooms were uncomfortably crowded. If space permitted, many interesting stories might be told to show how much the children appreciated and enjoyed the baths. The boys attended in very large numbers.

From a distant part of the City, one little Polish girl of twelve used to appear every Saturday morning with seven others younger than herself, each carrying her bundle of clean clothes. After the baths, the little girls would depart, expressing the wish that Saturday would come oftener so that they might have more baths.

We desire to extend to Mr. Daniel T. Sullivan and Mr. Fred H. Rourke our sincere thanks for the coal which they furnished free of cost for the heating of the water, to the merchants who furnished us with goods at a discount for the industrial work, to all others who contributed material and supplies, and to the ladies who



CITY DIRECTORY  
ONE



SLIDE AND MERRY-GO-ROUND AT GREENHALGE SCHOOL PLAYGROUND.



visited the playgrounds, encouraging the workers by their presence and sympathetic interest.

We desire to testify to the interest and devotion to the work of Mr. John J. Pickman and Mr. Harvey B. Greene, playground committee of the Park Commission, and its Superintendent, Charles A. Whittet, the supervisors and all those employed in the playground activities. They have all entered into the spirit of the work, realizing, not only its practical side, but having also a full appreciation of its ideals. It may be truly said that their energies have been directed more because of the interest which they have had in the playground work rather than because of their financial compensation.

One thing has been demonstrated clearly in this City. The playgrounds are not only a desirable factor in providing proper recreation, under supervision, for the hosts of the City's children, by giving them proper exercises and proper physical education, but it also has had a marked effect on the peace, happiness and order in many localities; and it has been a great benefit to the tired mothers.

We are very grateful to the Press of the city for the space they have given to the "news" of the playgrounds.

FINANCIAL REPORT OF THE PLAYGROUND COMMITTEE  
OF THE MIDDLESEX WOMEN'S CLUB.

Receipts .....	\$669.95
Expenditures .....	615.57
	-----
Balance on hand Oct. 1, 1912.....	\$ 54.38

## RECEIPTS.

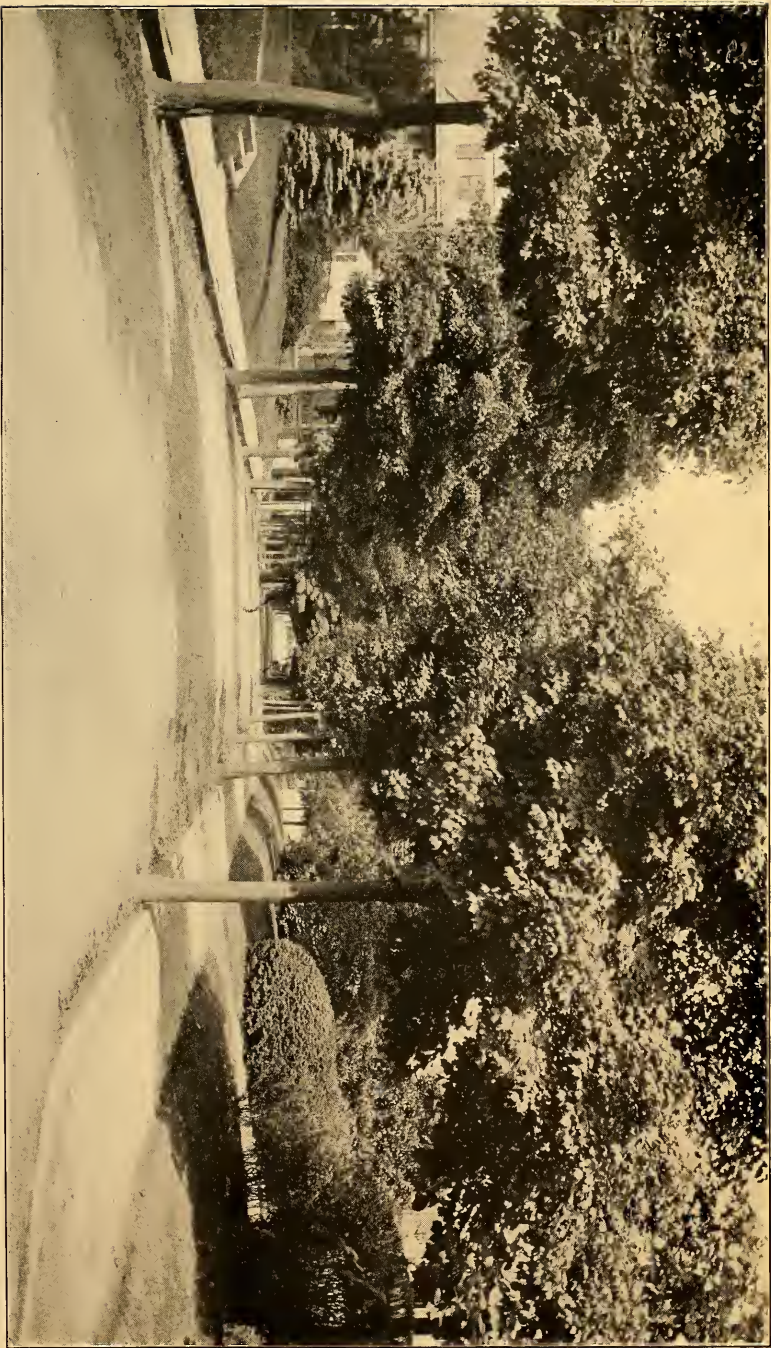
Cash on hand, Jan. 1, 1912.....	\$ 37.75
Receipts from Darrah Recitals (Feb.-March, 1912).....	558.20
Donations Unitarian Sunday School.....	15.00
“ Bay State Chapter D. A. R.....	55.00
“ Mrs. J. Harry Boardman.....	1.00
“ Unknown Friend (for Croquet Set).....	1.00
“ Whitney S. S. Class, 1st Universalist Church.....	2.00
<hr/>	
Total .....	\$669.95

## EXPENDITURES.

Marshall Darrah (Feb.-March, 1912).....	\$200.00
Printing and Advertising.....	16.00
South Common Playground (supervision).....	41.00
Greenhalge School Playground (supervision).....	118.00
Paige Street Playground (supervisor and care of grounds....	85.00
Baths (attendants and miscellaneous).....	113.00
Industrial work .....	41.57
Croquet Set .....	1.00
<hr/>	
Total .....	\$615.57

The playground work here has grown so large that we suggest the forming of a Playground Commission, which the City has power to do under Chapter 508, Section 1, of the amended Acts of the State of Massachusetts of 1910.





MARLBOROUGH STREET, SHOWING A WELL-PLANTED STREET.



The following Instructors and Supervisors were employed on the Playgrounds during the summer of 1912:—

SOUTH COMMON.

Miss Katherine M. Tobin      Mr. Patrick J. Reynolds  
Miss Mary Carolan  
Miss Marietta Calnan  
Miss Mary Reardon  
Miss Juliette McKissock

NORTH COMMON.

Miss Grace McAllister      Mr. E. J. Shulte  
Miss Anna McNabb  
Miss Ethel C. Park

LITTLE CANADA.

Miss Regina Frappier      Mr. Horatius B. Leggat  
Miss Mary Joyce  
Miss Gladys Melloon

GREENHALGE SCHOOL.

Miss Helen Hurd              Mr. Allan Eveleth  
Miss Eugenia Frappier      Mr. James H. Rooney  
Miss Elsa Braley

PAIGE STREET.

Miss Mabel Haggerty



## LIST OF CONTRIBUTORS TO THE PLAYGROUNDS.

Kate Hastings Taylor Charity Fund.....	\$100.00
Miss Martina A. Gage.....	20.00
D. L. Page.....	10.00
Lether W. Faulkner.....	10.00
G. C. Brook.....	10.00
Wm. Livingston Co.....	10.00
James F. Preston.....	10.00
Geo. Bowers .....	10.00
F. A. Flather.....	5.00
H. B. Greene.....	5.00
Jesse H. Shepard.....	5.00
Jos. Barber .....	5.00
A. K. Chadwick.....	5.00
F. A. Wood.....	2.00
John T. Sparks.....	1.00
J. J. Kerwin.....	1.00
<hr/>	
Total .....	\$209.00
Expenditures .....	159.80
<hr/>	
Balance on hand.....	\$ 49.20

## EXPENDITURES.

Alan C. Eveleth, instructor.....	\$ 60.00
James H. Rooney, instructor.....	25.00
Dr. R. L. Jones, prof. services.....	5.00
Miss Catherine Tobin, material.....	5.00
Miss Regina Frappier, material.....	4.00
Miss Helen Hurd, material.....	1.00
Miss Grace McAllister, material.....	1.00
Bay State St. R. R. Co., car tickets.....	16.25
Dickerman & McQuade, supplies.....	18.30
Bartlett & Dow, knives.....	1.75
Geo. A. Nelson, photographs.....	13.50
M. Steinert & Sons Co., rent piano.....	4.00
Michael Grosse, rent hurdy-gurdy.....	5.00
<hr/>	
Total .....	\$159.80

SIXTY-EIGHTH ANNUAL REPORT

OF THE

# LOWELL CITY LIBRARY

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TWENTY-THIRD REPORT

OF THE

# LIBRARY TRUSTEES

OF THE CITY OF LOWELL

MASSACHUSETTS



FOR THE YEAR NINETEEN HUNDRED TWELVE

# Administration of the Library, 1912

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## Board of Trustees

HON. JAMES E. O'DONNELL, Mayor, <i>Ex-officio</i>			
HENRY H. HARRIS	.	.	Term expires 1913
JOHN T. DONEHUE, D. D. S.	.	.	" " 1914
EDWARD J. WELCH, M. D.	.	.	" " 1915
HUGH J. MOLLOY	.	.	" " 1916
ALEXIS E. BERTRAND, M. D.	.	.	" " 1917

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## Organization

HON. JAMES E. O'DONNELL, Chairman  
JOHN T. DONEHUE, Vice-Chairman  
HENRY H. HARRIS, Clerk

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### Librarian

FREDERICK A. CHASE

### Asst. Librarian

ALICE M. MYERS

## Assistants

HARRIET F. HILL	ALICE L. DONEHUE
ALICE H. KIDDER	JOHN MANNING
HARRIET M. SULLIVAN	JOHN ANDREWS
CLARA BEARD	RICHARD CARR
DOROTHY P. WEBSTER	

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## Bindery

WALTER H. GILMAN                      HARRY C. BOWEN  
LEO MONGRAIN

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## Superintendent of Reading Room

STEPHEN T. WYMAN

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## Librarian of Children's Room

BERTHA G. KYLE

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## HON. GEORGE F. RICHARDSON

At a meeting of the Trustees, held Monday, April 8, 1912, the following resolutions were adopted:

Hon. George F. Richardson, a former Trustee of the Library, died Friday, March 22, 1912. He was closely identified with the incorporation of the Library in 1888, drafting its charter and active in securing its passage by the Legislature. He was appointed by Mayor Palmer, at this time, for the five-year term and served as Trustee until the end of 1908, completing four five-year terms of service. He was Vice-Chairman of the Board during this entire period. His interest in the welfare of the Library was keen and no one was more active in its behalf than he. His legal ability, his wide knowledge of books, his influence and prominence in public life, lent a distinction to his service as Trustee.

RESOLVED: That we sensibly appreciate the obligation of the Library to Mr. Richardson for his service on this Board and esteem the work he performed for this Library as of great value.

RESOLVED: That this tribute be placed in full upon our minutes, and a copy sent to the bereaved family.

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## Report of the Trustees for 1912

*To the Honorable, the Municipal Council of Lowell:*

Gentlemen:—The Trustees of the City Library herewith present their annual report for the year 1912.

### FINANCIAL STATEMENT

#### Receipts

Balance from previous year .....	\$	3	69
Appropriation by Municipal Council .....		14,500	00
Interest on Deposit .....		72	65
Fines and other receipts .....		612	12
			<hr/>
			\$15,188 46

#### Expenditures

Salaries .....	\$11,262	46
Lighting .....	921	64
Binding .....	761	91
Books .....	221	03
Periodicals .....	849	17
Sundries—Printing .....	\$158	12
Water Tax .....	13	50
Express, etc. ....	49	33
Supplies .....	282	85
Postage .....	30	50
Miscellaneous .....	253	70
Power .....	18	76
Repairs, etc. ....	107	36
		<hr/>
		914 12
Delivery Station .....	233	73
Cash on hand .....	24	40
		<hr/>
		\$15,188 46

## JOHN DAVIS FUND

## Income for 1912

Cash on hand at last report .....	\$ 1,751 91	
Interest and dividend earnings on investments and loan .....	4,291 16	
From re-payment of loan to General Library Fund .....	1,700 00	
Liquidation dividends No. 12, 13, 14, National Bank of Republic .....	92 00	
Refund of taxes on National Bank shares ..	87 67	
Received from sale of 50 shares, Merrimack Co. ....	2,000 00	
Received from sale of 4 shares, Middlesex Co. ....	280 00	
		—————\$10,202 74

## Expenditures

For temporary loan to General Library Fund in anticipation of annual appropriation of Municipal Council .....	\$1,700 00	
Expenses of Children's Room .....	728 00	
Expenses of Sunday Opening .....	350 60	
Books purchased for the Library .....	3,840 07	
Furnishings for Children's Room .....	201 94	
Audit .....	25 00	
Deposit in Central Savings Bank on account 35075 for Sinking Fund .....	100 00	
American Telephone & Telegraph Co., bond purchased .....	1,819 62	
Atchison, Topeka and Sante Fe, bond purchased .....	978 56	
Cash on hand January 1, 1913 .....	458 95	
		—————\$10,202 74

The year has been one of continued and satisfactory progress. It is gratifying to report an increased use of the Library. The circulation at the Main Library was 110,714, Children's Room 27,116, Centralville Station 22,839—a total of 160,669 for the year. This was a gain of 18,682 over the circulation for 1911 and a gain of 32,457 over the circulation for the previous year.

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#### CHILDREN'S ROOM.

The circulation of the Children's Room for 1912 shows an increase of 1,638 volumes over last year, the total being 27,116. Doubtless this is partly due to the efforts of several teachers in securing cards for their pupils.

The fact that the **attendance** has been more than twice as large as the **circulation** shows that parents do not yet fully appreciate the advantages of this department. But many who have availed themselves of the privilege of securing cards for their children feel well rewarded for their pains.

It has been shown that children, having for several years pursued a varied line of reading under guidance in the Children's Room, invariably call for the best; and that these young readers not only show a fine discrimination regarding literary worth, but have acquired a noticeably good vocabulary, and a large fund of general information. Parents and teachers have commented upon these facts, and have observed, also, the influence on character.

BERTHA G. KYLE, Librarian.



## JOHN DAVIS FUND

January 17, 1913.

A committee of the Trustees, consisting of Messrs. Molloy, Harris and Donehue, today called on the City Treasurer, Andrew G. Stiles, who produced for their examination the following securities of the John Davis Fund of which he is custodian.

## LIST OF SECURITIES

## Registered Bonds

NAME	Due	Rate of Interest	Par Value		Present Value
City of Boston	1919	3½%	\$10,000.00	@ 96 <sup>7</sup> / <sub>8</sub>	\$ 9,687.50
Boston & Maine R. R.	1944	4½%	11,000.00	@ 99½	10,945.00
Boston & Maine R. R.	1926	4%	10,000.00	@ 94	9,400.00
Boston & Maine R. R.	1929	4½%	5,000.00	@ 99¼	4,962.50
N. Y., N. H. & H. R. R.	1954	4%	10,000.00	@ 97½	9,750.00
N. Y., N. H. & H. R. R.	1914	4%	10,000.00	@ 99⅓	9,912.50
Illinois Central R. R.	1952	3½%	10,000.00	@ 85	8,500.00
Boston & Albany R. R.	1952	3½%	4,000.00	@ 89½	3,430.00
Am. Tel. & Tel. Co.	1929	4%	2,000.00	@ 89½	1,790.00
Atch., Top. and Sante Fe	1995	4%	1,000.00	@ 97½	976.25
				\$73,000.00	\$69,353.75

## Railroad Stock

No. Shares	NAME OF ROAD	Price per Share	Amount
41	Boston & Maine (Common)	\$ 96.50	\$ 3,956.50
39	Boston & Albany	212.50	8,287.50
1	Nashua & Lowell	242.00	242.00
1	Concord & Montreal (4th Class)	138.00	138.00
			\$12,624.00

## Manufacturing Stocks

No. Shares	NAME OF COMPANY	Price per Share	Amount
6	Lowell Bleachery	\$128.00	\$ 768.00
49	Bigelow Carpet	170.00	8,330.00
			\$9,098.00

## Miscellaneous Stocks

12	American Tel. & Tel. Co.	\$136.00	\$1,632.00
3	Lowell Gas Light Co.	306.00	918.00
			<hr/>
			\$2,550.00

## Bank Stocks

No. Shares	BANK	Per Share	Amount
6	Nat. Bank of Commerce, Boston	\$225.00	\$1,350.00
9	Appleton Nat. Bank, Lowell	105.00	945.00
3	Old Lowell Nat. Bank, Lowell	110.00	330.00
2	Wamesit Nat. Bank, Lowell	100.00	200.00
11	Union Nat. Bank, Lowell	180.00	1,980.00
10	First Nat. Bank of West Newton	175.00	1,750.00
			<hr/>
			\$6,555.00

## Savings Bank Book

BANK	Book No.	Amount
Central Savings Bank	35,073	\$803.10

## Mortgage Notes

M. & D. G. M.	\$ 75.00
A. H.	2,000.00
M. M. & D. W. R.	650.00
	<hr/>
	\$2,725.00

## Summary of Investments and Cash Assets

Name of Investment	Valuation Dec. 29, 1911	Valuation Jan. 14, 1913	Increase	Decrease
Registered Bonds	\$68,222.50	\$69,353.75	\$1,131.25	
Railroad Stocks	13,083.00	12,624.00		\$ 459.00
Manufacturing Stocks	10,995.00	9,098.00		1,897.00
Miscellaneous Stocks	2,556.00	2,550.00		6.00
Bank Stocks	5,890.00	6,555.00	665.00	
Savings Bank Book	674.86	803.10	128.24	
Mortgage Notes	2,725.00	2,725.00		
Cash in Bank	1,053.68	458.95		594.73
Silverware and Jewelry	90.15	90.15		
<hr/>				
	\$105,290.19	\$104,257.95	Net Decrease	\$1,032.24

All of the bonds mentioned above were found to be correctly registered with the exception of

2000 American Telephone & Telegraph 4's,

1000 Atchison, Topeka and Sante Fe 4's,

both of these being coupon bonds.

The Stock certificates and Savings Bank book were properly issued and entitled to the Trustees. The Mortgage notes showed proper endorsements for all interest payments, and the interest on the Savings Bank book written up to date. The cash balance of \$458.95 was certified to by letter from the Appleton National Bank.

HUGH J. MOLLOY,

HENRY H. HARRIS,

JOHN T. DONEHUE,

Auditing Committee.

## List of Donors, 1912

	Vols.	Pamphlets
Adams, I. William .....	1	
Altgeld Memorial Association .....	1	
American Canoe Association .....	1	
American-Irish Historical Society .....	1	
American Iron and Steel Institute .....	1	
Atlantic Deeper Waterways Association .....	1	
Baker, Mrs. Martha A. ....	1	
Balch, T. W. ....	1	
Benziger Pub. Co. ....	1	
Blummer, Samuel .....	1	
Boston Public Library, Trustees of .....	1	
Bowditch, Vincent Y. ....	2	
Brown University .....	1	
Bryn Mawr College .....	1	
Burbank, Samuel .....	1	
Buttrick, Mrs. J. G. ....	1	
Charter Revision Com. ....		1
Chase, Frederick A. ....	1	
Chicago & North Western R. R. Co. ....		1
Colton, Dr. John J. ....	1	
Dartmouth College .....	1	
Davison Pub. Co. ....	1	
Doubleday, Page & Co. ....	1	
First Church of Christ .....	1	
Greene, Pollet L. ....	1	
Greene, Nelson L. ....	1	
Gudewill, F. W. ....	30	
Harvard Club of Lowell .....	1	
Harvard University .....	1	
Haskell, S. N. ....	3	
Honolulu Chamber of Commerce .....	1	
Hooker, Arthur, Sec. ....	1	
Hudson-Fulton Committee .....	1	
Hutchinson, Chas. C. ....	36	
Kenngott, Rev. Geo. F. ....	1	

	Vols.	Pamphlets
Longmans, Green & Co. ....	1	
Lowell, City of ....	4	
Loyal Legion, State of Mass. ....	1	
Lusk, W. T., Children of ....	1	
McGowan, Patrick F. ....	1	
Massachusetts Grand Army of the Republic ....	1	
Massachusetts State Board of Agriculture ....	2	
Massachusetts, State of ....	9	
Natl. Asso. for Advancement of Colored People ...		1
New York, State of ....	1	
Ober, Miss Emma J. ....		1
Oppenheim, L. ....	1	
Pan-American Union ' ....		1
Parker, Moses G., M. D. ....	4	
Ramsay, Jas. P. ....	1	
Raymond, Geo. L. ....	1	
Reade, Brig. Gen'l Philip ....		2
Remonstrance, The ....	1	
Royal Society of Canada ....	1	
Sanis, Harry ....	1	
Seattle Public Library ....	1	
Shuman, A. ....	1	
Singer, B. ....	1	
Somerville Board of Trade ....	1	
Spaulding, Henry G. ....	1	
Spofford, Harriet P. ....	1	
Submarine Signal Co. ....		3
United States Brewers Association ....	2	
United States Government ....	—	
White, Miss Ellen D. ....	12	
White Fund ....	1	
Wisconsin Historical Society ....	1	
Wood, Frederick A. ....	1	
Woodbury, C. J. H. ....	1	
Wright, Benj. C. ....	1	
	156	10

## Condition of the Library

Volumes purchased during the year .....	2,889
Volumes added by gift .....	52
Volumes added by binding periodicals .....	139
Worn-out books replaced .....	118
Duplicates purchased .....	583
Total number of volumes added .....	2,379
Total number of volumes in the Library .....	86,895
Periodicals and papers subscribed for .....	230
Periodicals and papers given .....	32
Number of volumes used, home and reference .....	160,611
Number of volumes consulted in the Reference Room ..	11,567
Number of postcards sent to delinquents during year ..	606
Library open, days .....	304
Total circulation .....	160,611
Average daily circulation .....	527
Largest monthly circulation (March) .....	17,884
Smallest monthly circulation (July) .....	9,790
Largest daily circulation (March 16th) .....	1,123
Smallest daily circulation (August 22nd) .....	98
Percentage of fiction read .....	72.6
Percentage of other classes .....	27.4

### New Registration With Three Year Limit, April 1, 1910

Applicants received during the year .....	2,893
Applicants who did not call for cards .....	66
Number of names registered Dec. 31, 1911 .....	10,257
Number of names registered Dec. 31, 1912 .....	13,084
Total registered during the year .....	2,827
(New.....2,560      Renewed.....267)	

## EXHIBITIONS

Ireland No. 2	Food and game fishes	Japanese Color Prints
Venice No. 5	of N. Y.	Rulers of Italy
Caldecott Pictures	Cotton and Silk	Bridges
Balloons	Buckingham Palace	Japan No. 1
Pompeii	Tyrol	Lumbering

## ANNOUNCEMENTS

Library and Reading Rooms open from 9 A. M. to 9 P. M.,  
except on legal holidays.

Reading Rooms open Sundays, 9 A. M. to 9 P. M.

Library open Sundays for reference use only 2 to 9 P. M.

The regular meeting of the Trustees of the Library is held  
on the first Monday of each month, at 4.30 o'clock P. M.

## CONTENTS OF THE LIBRARY, CLASSIFIED

Class of Books	No. Vols.
General Works .....	2,142
United States Government Publications .....	6,000
Magazines .....	11,263
Philosophy .....	1,422
Theology .....	4,162
Sociology .....	4,416
Philology .....	507
Science .....	3,353
Useful Arts .....	3,308
Fine Arts .....	3,989
General Literature .....	9,213
Biography .....	6,750
History, Description and Travel .....	12,816
Genealogy and Heraldry .....	454
Fiction .....	16,000
Standard Library .....	1,100
Total .....	86,895









# Annual Report of the City Solicitor



For the Year Ending  
December 31, 1912

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Lowell, Mass.  
Butterfield Printing Company

1913



LOWELL, MASS., October 22, 1913.

TO THE HONORABLE THE MAYOR OF THE CITY OF LOWELL:

DEAR SIR:

I have the honor to submit to you the report of the City Solicitor for the Municipal year of 1912, pursuant to the Ordinances of the City of Lowell, and, before entering into detail of the work accomplished by the department, I beg leave to call your attention to the fact that the administration of the affairs of the Law Department during said year was ushered in with manifold new conditions and requirements theretofore unknown.

The service of the department was frequently called into requisition by every department of the Government that had to do with the administration of the affairs of the city. The Government of 1912 was confronted with the provisions of a new charter which theretofore had no precedent in its application; hence, the necessity of establishing a "modus operandi." The Charter was a complete revolution of former methods of government and the Act was interpreted practically in its entirety—always in the light of the legislative intentment.

The City Solicitor rendered during the year a multiplicity of opinions concerning the duties, obligations, rights, powers and privileges, not only of the administrative heads of the various departments, but concerning the methods by which the legislature intended that the affairs of the city should be administered.

Concerning the matter of claims for personal injuries as well as supposed claims of a contractual nature against the city, each received the attention of this department, and there has been no inconsiderate number of such matters during the year.

In relation to the adjustment of grade crossing cases, the City Solicitor has had most of the detail to attend to for the reason that all claims were in the first instance brought against the city.

The City Solicitor has held himself ready at all times to render opinions to all members of the government and to all administrative officers and officials who have had anything to do with the management of the affairs of the city.

The matters concerning Land Court Titles to property where encroachments were made upon public ways and streets, suits by Trustee Process, assignment of wages of employees of the city, all received consideration of the Law Department.

Epitomizing, therefore, in a phrase, it is the opinion of the City Solicitor that much has been accomplished in the Law Department, and there is yet a vast amount of work to be accomplished.

I recommend a revision of the Ordinances of the City of Lowell.

I recommend a compilation, in sequential form, of all organic laws relating to the City of Lowell.

I recommend the publishing of such laws and ordinances for the benefit of the Government.

I recommend that an appropriation be made to cover the expense of codification and compilation of such laws and ordinances, for the reason that the meager appropriation for that department is insufficient.

The various matters that required the attention of the Law Department were mainly without precedent and for that reason required in their consideration more time than would ordinarily be necessary. Yet, however, in nearly every instance, care, expedition and despatch were exercised as the rule.

If minor matters in any instance were not attended to, it was because of the stress of the many important subjects with which the department was encompassed. The Law Department, in a measure, has taken over many of the duties that were formerly performed by the Clerk of Committees, and during the year 1912 the City Solicitor attended meetings of the Municipal



Council and was ever ready to place at the disposal of the government whatever resources the Law Department possessed for the benefit and conservation of the interests of the government.

The City Solicitor spent much time in matters of legislation that appertained to the interest of the city, and whenever it was necessary he appeared before Legislative Committees of the General Court of Massachusetts in the interest of the city, especially in the matter of legislation that sought to retire the long since established temporary loan.

In conclusion, I feel it my duty to say to you that Captain Michael E. McDonald, who for more than thirty years has been connected with the Law Department of the city, has rendered incalculable service to the City Solicitor in the discharge of his duties. He has enriched the department with a wealth of historical data that has been invaluable to the department in dealing with the varying propositions that it has been called upon to consider.

Respectfully submitted,

J. JOSEPH HENNESSY,

*City Solicitor.*



# REPORT

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OFFICE OF CITY SOLICITOR  
LOWELL, MASS.

January 1st, 1913.

TO THE MUNICIPAL COUNCIL OF THE CITY OF LOWELL,

GENTLEMEN:

I herewith submit the Annual Report of the Law Department for the year 1912.

20660 *George E. Bennett et al vs. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused by change of grade crossing on School Street. The writ is dated January 2, 1912, and returnable the first Monday of February, 1912. Pending.

13114 *C. Arthur Abbott vs. Stephen Flynn et al.*

This was a petition of C. Arthur Abbott, praying that a writ of mandamus might issue against Stephen Flynn, City Clerk, Daniel E. Hogan, Albert J. Blazon and Jeremiah J. O'Sullivan, members of the Board of Assessors of Taxes, James E. O'Donnell,

Mayor, Lawrence Cummings, James E. Donnelly, Andrew E. Barrett and George H. Brown, constituting with the Mayor the Municipal Council of the City of Lowell, commanding Stephen Flynn to amend his records of the proceedings of the Municipal Council at a meeting held May 11, 1912, and state the motion and the vote made and taken so that the same may conform to the truth; and state the motion made and vote taken for the election of the respondent Daniel E. Hogan; the motion and vote actually made and taken without naming the petitioner or any other person whom Daniel E. Hogan was to succeed and to command the respondents to receive and act with the petitioner as a member of the Board of Assessors of Taxes, against the respondent Daniel E. Hogan from acting as such member. Order of notice was dated July 9, 1912. Hearing was had before Mr. Justice Loring, July 26, 1912.

In this case the Court found that Daniel E. Hogan was duly and legally elected as an assessor of taxes for the City of Lowell.

21140 *Charlotte Ryan vs. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages for land taken by the City of Lowell on the northerly side of Pawtucket Boulevard for the purpose of improving and increasing its water supply. The writ was dated December 28, 1912 and is returnable the first Monday of February, 1913.

Pending in Court and in process of adjustment, the city to pay 2 cents per foot for the land taken.

22499 *William J. Burke vs. City of Lowell.*

This is an action of tort brought in the Superior Court to recover the sum of \$10,000, for personal injuries received on

September 22, 1912, while travelling along on the westerly side of Howard Street about opposite No. 33 on said street. The writ is dated November 29, 1912, and returnable the first Monday of January, 1913. Pending.

2410. *George B. White et al vs. Patrick Conlon. (Equity)*

This is a bill of complaint brought by the complainants to restrain by injunction the respondent from obstructing Paige Street and that the respondent be required by the decree and order of the Court to remove all obstructions that he has placed in said street opposite the premises of the complainants and restore said street and sidewalk to as good condition as the same were in when the respondent commenced said building operations. The writ was dated November 22, 1912, and returnable to Superior Court, citing the respondent to appear before Superior Court, Tuesday the 26th day of November, 1912.

This case was adjusted to the satisfaction of all parties without a hearing in Court. The City Solicitor defended the respondent for the reason that the complaint concerned a public work.

12788 *George C. Evans vs. James H. Rooney et al.*

This was a petition to the Supreme Judicial Court, praying that a writ of mandamus might issue in favor of the petitioner and directed against the Mayor of the City of Lowell, the Municipal Council, the Board of Registrars of Voters of the City of Lowell and James H. Rooney, commanding them to recognize the petitioner as a member of the Board of Registrars of Voters and not further to deny or interfere with him in the performance of his duties as member of said Board of Registrars, and to do such other things in that behalf as the law requires, and against said James H. Rooney, commanding him to refrain from the perform-

ance of the duties of said office as said member of the Board of Registrars of Voters, and in no way to interfere with the petitioner in the performance of said duties. The petition was filed May 27, 1912. Hearing was held before Mr. Justice Hammond, June 7, 1912, who dismissed the petition and declared James H. Rooney to be duly and legally elected as a Registrar of Voters of the City of Lowell.

584. *William B. Moffatt vs. James E. O'Donnell, Mayor.*

This is a petition to the Supreme Judicial Court, praying that writ of mandamus might issue against James E. O'Donnell, Mayor of the City of Lowell, commanding him to execute and deliver to the City Treasurer a warrant to pay the petitioner pension due him at the rate of \$1000. per year as retired member of the police force from December 31, 1911, to the time of the filing of the petition, November 27, 1912.

To this petition the City Solicitor filed the following answer:

COMMONWEALTH OF MASSACHUSETTS.

Middlesex, ss.

Supreme Judicial Court.

WILLIAM B. MOFFATT

*vs.*

JAMES E. O'DONNELL,

Mayor of the City of Lowell in said County of Middlesex.

*Answer of Respondent.*

And now comes the respondent, James E. O'Donnell, Mayor of the City of Lowell and for answer says:

*First:* That he neither admits nor denies that William B. Moffatt is a resident of Lowell in the County of Middlesex and Commonwealth of Massachusetts, but leaves the same to be proven by the petitioner.

*Second:* That he neither admits nor denies all other averments contained and mentioned on the said first page of the plaintiff's petition and puts him to a proof of the same if such proof be material.

*Third:* That he admits the averment that the resolution mentioned and stated on the second and third pages of said petition was passed by the Board of Police of the City of Lowell.

*Fourth:* That your respondent admits that on the 25th day of May, 1909, the Board of Police of the City of Lowell voted that the City Auditor, Charles D. Paige, be notified of the transfer of Superintendent William B. Moffatt to the pension roll of the department.

*Fifth:* That your respondent denies that the said petitioner was duly retired according to the provisions of law appertaining to the retirement of members of the police department.

*Sixth:* Your respondent admits that he has refused to sign warrants for the payment of a pension to the petitioner.

*Seventh:* That your respondent neither admits nor denies the averment that there is now due to the petitioner any pension, pursuant to law, and leaves it to the petitioner to prove the same.

And your respondent further answering says, that pursuant to the Revised Laws of the Commonwealth of Massachusetts, Chapter 108, Section 29, as amended by the Acts of 1909, Chapter 428, and further amended by the Acts of 1909, Chapter 188, and approved March 18th, 1909, that in order for a member of the



police department to be granted a pension it must appear in case of 20 years service, that "in the judgment of said board (meaning the Board of Police) such member is disabled for useful service in said department."

That no such record does appear, and that no such vote was ever taken or passed by the Board of Police of the City of Lowell that the said William B. Moffatt was "in the judgment of said board disabled for useful service in said department."

That moreover from and after the first day of January, 1912, and for a long time prior thereto the said petitioner has taken himself far beyond the jurisdiction of this Commonwealth and has established residence there, and is not within the call of the department of police of the City of Lowell in case of emergency for temporary service, pursuant to the provisions of Chapter 428, Section 3, of the Acts of 1903.

Your respondent further says, that said petitioner has never notified the police department of the City of Lowell of his whereabouts, nor has he ever notified the Mayor of the City of Lowell, who is the Commissioner of Public Safety and the administrative head of the police department of his said whereabouts since the first day of January, 1912, nor does your respondent now know nor has he ever known where the said petitioner inhabits or resides.

And furthermore your respondent says that he denies that the said petitioner was a member of the police department of the City of Lowell on May 24th, 1909, nor was he a member of said department for a long time prior thereto, as intended by the law creating pensions for members of the police department of cities except Boston within the Commonwealth of Massachusetts."

Hearing was had at Court House, Boston, December 17, 1912, before Mr. Justice Morton of the Supreme Judicial Court and a finding was made by him, as follows:

## FINDING.

The petitioner did not cease to be a member of the Police Department when he became Superintendent of Police; that the statute does not provide that the pension should be dependent in whole or in part on the petitioner's remaining in Lowell or in this State, so as to be subject to the call of the Mayor or of the Board of Police for such temporary service as he might be fitted to perform; that the petitioner is entitled to a writ of mandamus as prayed for and thereafter, at the defendant's request and with the consent of the plaintiff, the case was reserved for the consideration of the full Court upon the pleadings and the statement of facts which had been agreed upon by the parties.

The case will come on to be heard before the full bench at the March, 1913 sitting.

2402. *R. C. Maxwell Company vs. James E. O'Donnell et al.*

(*Superior Court, Equity*)

This is a bill of complaint praying that a bill of injunction may issue against the said respondents, their agents and servants to enjoin and restrain them from removing, disturbing or destroying a certain sign on a building known as the "HOWE BUILDING," situated at the southeast corner of Prescott Street and Merrimack Square.

Order of notice was filed November 8, 1912. Pending.

22302. *Frederick T. Clauss vs. City of Lowell.*

This is an action of tort for personal injuries alleged to have been received by reason of a defect in the sidewalk on the easterly side of Gorham Street at the Middlesex County Court House,

situated at a point opposite a post at the entrance to said Court House. The writ was dated October 17, 1912 and returnable the first Monday of December, 1912. Pending.

22055. *Sarah A. Chadwick vs. City of Lowell.*

This is an action of tort for personal injuries alleged to have been received on the northerly side of Inland Street at a point near its junction with Chelmsford Street. The writ was dated September 25, 1912, and returnable to the Superior Court the first Monday of November, 1912. Pending.

351. *Angelina Charette vs. City of Lowell.*

This was an action of tort to recover the sum of \$1000. for personal injuries received March 28, 1912, about opposite 534 Moody Street. The writ was dated July 11, 1912, and returnable the third Saturday of August, 1912.

The case was heard before Mr. Justice Enright, November 27, 1912, who found for the plaintiff in the sum of \$400.20, together with costs amounting to \$14.64, which was paid by the city.

234. *Charles J. Green vs. City of Lowell.*

This was an action of contract brought by the plaintiff to recover the sum of \$200. alleged to be due for one driving horse sold to the Buildings Department of the City of Lowell. The writ was dated April 12, 1912, and returnable to the Police Court of Lowell the 4th Saturday of May, 1912.

Trial was had June 19, 1912, and resulted in a verdict for the City of Lowell.

21695. *Edward Cawley vs. City of Lowell.*

This was an action brought in the Superior Court by the plaintiff to recover the sum of \$873.01, with interest thereon, for furnishing coal to the City of Lowell. The writ was dated June 29, 1912, and returnable the first Monday of August, 1912.

After a very careful examination of the facts the City Solicitor became satisfied that a verdict was probably inevitable, and, therefore, deemed it wise to effect a settlement, and in justice to the best interests of the city recommended to the School Committee that the claim should be paid—and it was paid.

21514. *John J. Kelley vs. City of Lowell.*

This is a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at School Street. The petition was filed with the Superior Court, July 3, 1912, and returnable the first Monday of August, 1912. Pending.

125. *Walter Booth Company vs. City of Lowell.*

This was an action of tort brought in the Police Court of Lowell to recover the sum of \$1000. for injuries received to plaintiff's horse, August 14, 1911, while driving along Middlesex and Gorham Streets, owing to the alleged careless and negligent manner of one of the agents of the defendant in driving an automobile which collided with the horse of the plaintiff. The writ was dated February 14, 1912, and returnable the third Saturday of March, 1912.

Trial was had July 12, 1912, and the Court found for the plaintiff in the sum of \$46.50 with costs amounting to \$12.24 which was paid by the city.

87. *Arnold A. Byam et al vs. City of Lowell.*

This was an action of contract brought by the plaintiffs in the Police Court of Lowell to recover the sum of \$600. as commission for the purchase of certain tracts of land seized by the City of Lowell for water works purposes. The writ was dated January 18, 1912, and returnable the fourth Saturday of February, 1912. Trial was had April 22, 1912, and on April 25, 1912 the Court found for the plaintiff in the sum of \$491.09 together with costs amounting to \$11.04. On May 2, 1912, the defendant appealed to the Superior Court. Trial was had on appeal to the Superior Court, December 23, 1912, before Mr. Justice McLaughlin. The Court found for the plaintiff in the sum of \$438.26 with costs amounting to \$37.19, and judgment was satisfied.

559. *Catherine Guyette vs. City of Lowell.*

This was an action of tort brought in the Police Court of Lowell for damages in \$1000. to plaintiff's buildings on Aiken Avenue and household articles contained therein because of alleged negligence of the city while constructing a sewer in Aiken Avenue in June, July and August, 1911. The writ was dated October 31, 1911, and returnable the first Saturday of December, 1911. Trial was had in the Police Court of Lowell, and the Court found for the plaintiff in the sum of \$350. together with costs. An appeal was taken by the defendant to the Superior Court; counsel for the plaintiff accepted an offer of \$325. in full settlement of damages and costs and it was agreed that entry might be made "Judgment for the plaintiff and judgment satisfied."

245. *John B. Clancy vs. City of Lowell.*

This was an action of tort or contract brought by the plaintiff in the Police Court of Lowell to forbid the defendant from interfering with the construction of certain buildings on Floyd Street. Pending.

19087. *Joseph G. Wright vs. City of Lowell.*

This was a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at School Street. The writ was dated July 15, 1911, and returnable the first Monday of September, 1911. The case was settled without trial in Court.

19808. *Eva M. Wright vs. City of Lowell.*

This was a petition to the Superior Court for a jury to assess damages alleged to have been caused to the plaintiff by reason of the alteration of the grade crossing at School Street. The writ was dated July 15, 1911, and returnable the first Monday of September, 1911. The case was settled without trial in Court, and it was agreed that entry should be made, "Judgment Satisfied."

19126. *Pecvey Foundry Co., Inc. vs. City of Lowell.*

This was a petition to the Superior Court for a jury to assess damages sustained by the petitioners by the building of a high embankment in front of their premises in pursuance of a

decree of the commissioners appointed by the Court on the petition for the abolition of the grade crossing on Walker Street. The petition was filed July, 1911, and returnable the first Monday of September, 1911. The case was settled without trial in Court.

In all the land damage cases because of abolition of grade crossings, above mentioned the city was obliged to pay but 10 per cent. of the damage, the Commonwealth of Massachusetts paying 25 per cent. and the Boston & Maine R. R. paying 65 per cent.

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## LAND COURT CASES

During the past year twenty-nine (29) petitions to register titles to land in Lowell have been filed in the Land Court. In each case an answer was filed and a decree issued in conformity with the right of the city.

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## WRITTEN OPINIONS

Upon request of the several members and heads of departments and officials of the City Government, many written opinions upon various matters relating thereto were rendered.

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In the following cases no changes have been made during the past year.

3032. *Bragg Manufacturing Co. (U. S. Ct.) vs. City of Lowell.*

869. *Bernard Delaney vs. City of Lowell.*

922. *James Smith et al vs. City of Lowell.*



1151. *Patrick O'Hearn vs. City of Lowell.*
274. *Peter Curran vs. City of Lowell.*
16707. *Alden B. Ilsley vs. City of Lowell.*
18230. *John H. Handley vs. City of Lowell.*
18451. *Patrick S. Smith vs. City of Lowell.*
19073. *Winnifred Ratigan vs. City of Lowell.*
19001. *Charles Lajoie vs. City of Lowell.*
19207. *George H. Brown vs. City of Lowell.*
19209. *Catherine Goulet vs. City of Lowell.*
19208. *Hercule Goulet vs. City of Lowell.*
19512. *Guiseppe Capone vs. City of Lowell.*
19415. *Curtis McEwan vs. City of Lowell.*
19541. *Robert G. Bartlett vs. City of Lowell.*
20129. *City of Lowell vs. Lizzie Fitzgerald alias.*
19911. *Harry P. Graves, Admr. Est. of Andrew Peterson vs.  
City of Lowell.*
19829. *Melancthon M. Allen vs. City of Lowell.*
20176. *Edward Cawley vs. City of Lowell.*
882. *Hassam Paving Co. vs. City of Lowell.*
20027. *Aaron J. Harris vs. City of Lowell.*
20033. *Hugh J. Brogan vs. City of Lowell.*

20266. *Thos. H. Elliott vs. City of Lowell.*

20591. *Edwin E. McCausland vs. City of Lowell.*

109. *Redmond Sullivan vs. City of Lowell.*

1957. }  
1992. } *Grade Crossings (1910) Equity.*

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## WORK AND BUSINESS OF THE LAW DEPARTMENT

Preparation and Trial of Cases in Court.

Writing of Contracts.

Writing Releases and other Papers.

Written Opinions and Advice to the various Officers and Departments of the City Government.

Conveyance of Real Estate.

Examination of Titles.

Preparation of Resolutions.

Preparation of Orders.

Preparations of Ordinances and other Papers.

Legislative Hearings at State House.

Land Court Cases.

Investigation of Minor Claims against the city, which do not enter Court, but which are disposed of without suit by the Municipal Council.





LAWRENCE CUMMINGS,  
COMMISSIONER OF PUBLIC PROPERTY AND LICENSES

ANNUAL REPORT

OF THE

Buildings Department

OF

LOWELL, MASSACHUSETTS

FOR THE YEAR

1912



LOWELL, MASS.  
LAWLER PRINTING COMPANY  
29 PRESCOTT STREET  
1913



# ORGANIZATION

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LAWRENCE CUMMINGS

*Commissioner of Public Property and Licenses*

FRANCIS A. CONNOR

*Inspector of Buildings*

Deputy Inspector and Foreman - Albert E. Burnham

Clerk of Department - - - - Joseph F. Roarke

Robert J. Wotton

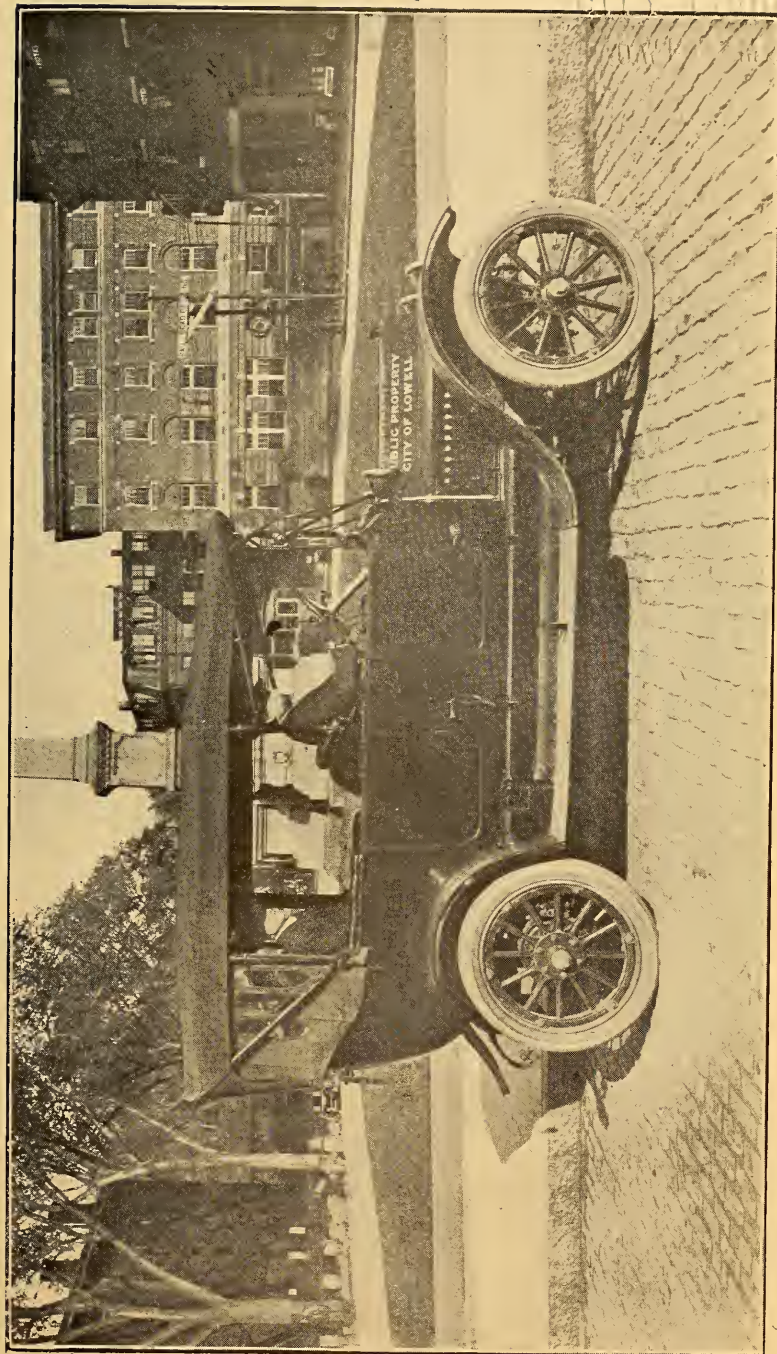
*Gas Piping Inspector*

Frank Legare

*Boss Painter*







BUILDING DEPARTMENT AUTOMOBILE



# REPORT

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OFFICE OF THE BUILDINGS INSPECTOR  
CITY HALL, LOWELL, MASS.

TO LAWRENCE CUMMINGS,

*Commissioner of Public Property and Licenses.*

With the close of business on December 31, 1912, the citizens of Lowell closed their first year under a new form of government. It is therefore natural to suppose the citizens at large are interested in learning just what progress has been made during that year so they may compare the work done with that of other years and judge for themselves under which form of government their interests are best served.

It has been the custom in years past for the heads of departments to submit annually to the City Council a general synopsis of the work done during the previous year in their respective departments. There is no better way to present the matter to the people and give them the opportunity to judge fairly the competency of the men elected to carry on the affairs of the city and whether the work of a department meets with their approval than by the annual report.

This custom still exists under our new board of government in a slightly different form.

Formerly a department head was responsible to the government as a whole, in his department his power was practically absolute and little of the detail of the department was known to any one member of the City government, but under our new form of government it is vastly

different, for now each department is only a part of a larger department which is in direct charge of a member of the Municipal Council. In this way the head of a department is under the orders of one Commissioner and is directly responsible to him at all times; the Commissioner in turn is responsible to the other members of the Municipal Council and the citizens at large.

It has been my privilege to serve in the capacity of Inspector of Buildings during the past year and in my report of the work of this department which is to follow, I shall endeavor to be as brief as possible and at the same time present the facts in a manner that can be easily understood.

The Building Department has been very active during the past year, for in addition to the regular repair work necessary to keep the buildings up to the standard, much in the form of work usually let out by contract has been done by this department's mechanics.

In this line might be mentioned the extensive alterations that have been made at the Rifle Range, where three large barricades and an addition to the target pit have been built; the office building at the Edson Cemetery has been moved, enlarged and generally renovated; an addition to Lincoln Street Fire House has been built and the second floor of this building has been divided into separate sleeping rooms; with the exception of the addition a similar change has also been made to the Fourth Street Fire House. Excellent temporary quarters have been provided at the City Hospital for the cattle, the barn having been destroyed by fire last summer. Several school buildings have undergone extensive repairs and in many places long looked for improvements have been made.

A large brick stable for the Health Department has been erected under the direction of this department, while the Comfort Station, a much needed convenience, has been started and will be completed this spring.

Besides this work the department has given much attention to the building inspection both regarding the construction of new buildings and the removal of dilapidated and dangerous buildings; many dangerous buildings having been condemned and torn down during the past year.

Respectfully submitted,

FRANCIS A. CONNOR.

*Inspector of Buildings.*



# Expenditures in Detail

## REGULAR APPROPRIATIONS

### BUILDINGS—OFFICE SALARIES AND WAGES

Appropriation.....	\$14,000 00
Appropriation by transfer.....	1,547 07
Receipts .....	370 59

#### Expended as follows

Inspector of Buildings.....	\$ 1,800 00	
Deputy Inspector of Buildings .....	1,260 00	
Clerk of Department.....	1,256 00	
Gas Pipe Inspector.....	1,004 80	
Janitors of Police Station .....	1,830 00	
Janitor of Memorial Hall.....	706 50	
Mechanics and Laborers .....	8,060 36	
	<u>\$15,917 66</u>	<u>\$15,917 66</u>

### BUILDINGS—OTHER EXPENSES

Appropriations .....	\$ 7,000 00
Appropriation (City Hall Heater).....	500 00
Appropriations by transfer .....	1,393 42
Receipts .....	1,166 32

#### Expended as follows

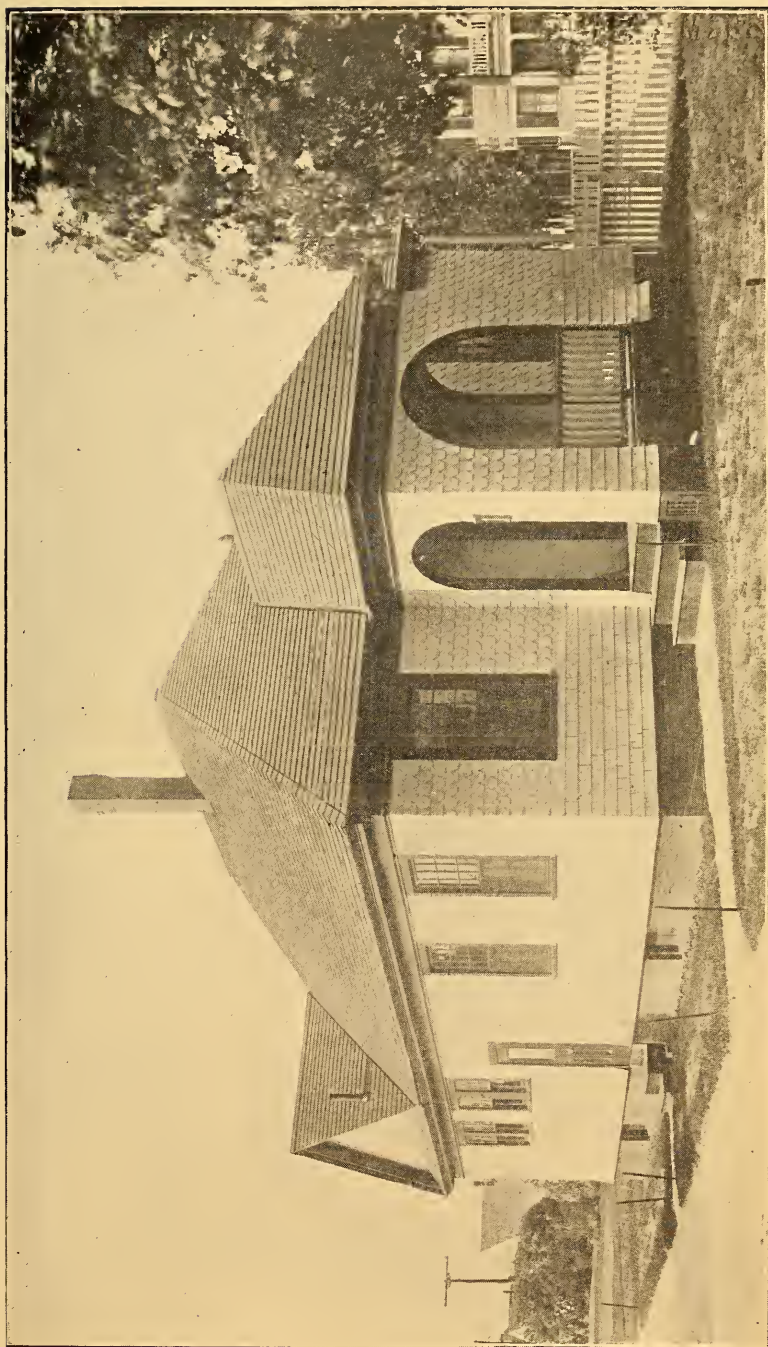
#### Supplies

Automobile.....	\$ 1,320 00	
Automobile supplies .....	42 58	
Coal .....	42 59	
Coffin trimmings.....	117 71	
Hardware. ....	433 83	
Harness, robes, etc.....	109 90	
Horse .....	200 00	
Janitor supplies .....	45 21	
Lumber.....	2,723 68	
Mason supplies .....	203 22	
Paint stock, oil, glass, etc .....	457 67	
Piper's supplies.....	108 99	
Stationery, printing, etc.....	204 57	
Water.....	25 20	
Miscellaneous.....	45 19	
	<u>\$ 6,080 34</u>	<u>\$10,059 74</u>

Amounts carried forward..

\$ 6,080 34    \$10,059 74





EDSON CEMETERY OFFICE BUILDING



Amounts brought forward..		\$ 6,080 34	\$10,059 74
Repairs and maintenance			
Board of horses.....	\$	919 79	
Constable service .....		59 66	
Electric power .....		189 07	
Electrical work.....		364 33	
General repairs and expenses..		212 20	
Hardware, tools, repairs.....		43 48	
Heating.....		880 26	
Mason work.....		120 21	
Metal work.....		74 09	
Plumbing.....		581 06	
Roofing .....		216 30	
Shoeing horses.....		160 10	
Wagon and harness repairs....		158 85	
		<u>\$ 3,979 40</u>	
		<u>\$10,059 74</u>	<u>\$10,059 74</u>

## RIFLE RANGE

### WAGES

Appropriation.....		\$ 628 00	
Expended as follows:			
Keeper at range.....	\$	628 00	
		<u>\$ 628 00</u>	<u>\$ 628 00</u>

### OTHER EXPENSES

Appropriation.....		\$ 372 00	
Carried from 1911.....		131 48	
Expended as follows:			
Electrical Work .....	\$	4 50	
Hardware.....		14 33	
Heating ...		3 60	
Lumber .....		23 94	
Mason supplies.....		66 00	
Mason work .....		129 40	
Roofing .....		75 00	
Targets, paster supplies, etc. ....		112 34	
Target practice.....		28 26	
Telephone.....		40 00	
		<u>\$ 497 37</u>	
Transferred to General Treasury.....		6 11	
		<u>\$ 503 48</u>	<u>503 48</u>

## SCHOOL HOUSES

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### WAGES

Appropriation .....	\$12,000 00
Receipts .....	526 70
Expended as follows:	
Mechanics and laborers as per payrolls ...	\$10,235 22
Transferred to General Treasury (used to piece out on buildings).....	2,291 48
	<u>\$12,526 70</u> <u>\$12,526 70</u>

### OTHER EXPENSES

Appropriation.....		\$ 9,000 00
Receipts.....		209 24
Expended as follows, (supplies):		
Grates .....	\$ 120 00	
Hardware.....	205 26	
Lumber.....	455 88	
Mason supplies .....	198 63	
Miscellaneous stock.....	15 55	
Paint stock, glass, etc.....	1,547 15	
Pipers supplies.....	271 29	
	<u>          </u>	\$ 2,813 76
Repairs and maintenance		
Advertising .....	\$ 6 60	
Board of horses.....	299 50	
Concrete .....	307 37	
Electrical power.....	55 89	
Electrical work.....	317 33	
Heating repairs.....	2,515 08	
Hardware repairs.....	75 20	
Mason work.....	405 28	
Plumbing repairs.....	824 03	
Roofing .....	772 46	
Sanitary flooring .....	39 50	
Teaming .....	20 83	5,639 07
		<u>          </u>
		\$ 8,452 83
Transferred to General Treasury, (used to piece out on buildings) ..		756 41
		<u>\$ 9,209 24</u> <u>\$ 9,209 24</u>

## SPECIAL APPROPRIATIONS

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### FIRE HOUSE REPAIRS

Unexpended in 1911—Balance carried over..		\$ 608 55
Expended as follows:		
Gas fixtures.....	\$ 53 00	
Lumber.....	6 06	
Stock .....	31 83	
Plumbing.....	30 50	
Plastering.....	175 00	
Labor.....	312 15	
	<hr/> \$ 608 54	
Balance transferred to General Treasury.....	01	
	<hr/> \$ 608 55	<hr/> 608 55

### FIRE HOUSE IMPROVEMENTS

Appropriation.....		\$ 7,000 00
Appropriation by transfer from Race St.,		
Fire House appropriation.....		796 41
Expended as follows:		
Advertising.....	\$ 32 10	
Department stock.....	355 49	
Electrical work .....	581 85	
Hardware .....	87 14	
Heating repairs.....	586 67	
Lathing.. ..	62 50	
Lumber.....	985 32	
Labor as per pay rolls.....	2,974 90	
Mason supplies.....	16 50	
Mason work.....	207 50	
Paint, oil, glass, etc.....	66 15	
Plastering .....	295 00	
Plumbing .....	403 24	
Roofing.....	136 82	
Sanitary flooring.....	277 85	
Shades.....	56 90	
Sheet metal work .....	31 44	
	<hr/> \$ 7,157 37	
Balance carried over to 1913.....	639 04	
	<hr/> \$ 7,796 41	<hr/> \$ 7,796 41

## RIFLE RANGE IMPROVEMENTS

Appropriation.....		\$ 3,000 00	
Expended as follows:			
Electrical work.....	\$	18 50	
Hardware.....		19 08	
Labor as per pay roll.....		1,854 48	
Lumber.....		80 16	
Mason supplies.....		235 07	
Teaming, etc.....		52 80	
		<u>\$ 2,260 09</u>	
Balance carried over to 1913.....		739 91	
		<u>\$ 3,000 00</u>	<u>\$ 3,000 00</u>

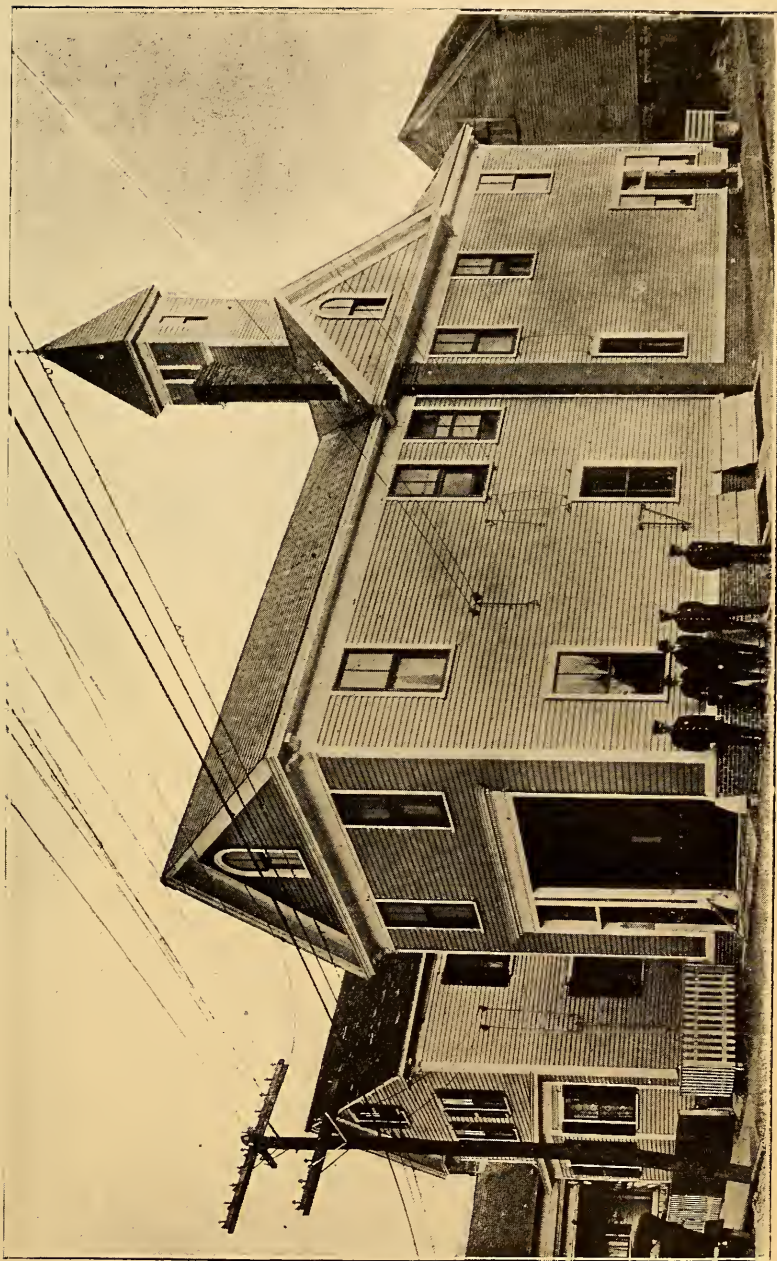
## ERECTION OF CITY STABLE

Appropriation.....		\$35,000 00	
Expended as follows:			
Advertising.....	\$	20 80	
Architect.....		832 05	
General contract.....		30,813 30	
Heating contract.....		475 00	
Plumbing contract.....		1,300 00	
Labor as per pay roll ..		173 40	
		<u>\$33,614 55</u>	
Balance carried over to 1913.....		1,385 45	
		<u>\$35,000 00</u>	<u>\$35,000 00</u>

## CITY HOSPITAL REPAIRS

Appropriation (Insurance money).....		\$ 1,292 58	
Labor as per pay rolls.....	\$	52 20	
		<u>\$ 52 20</u>	
Balance carried over to 1913.....		1,240 38	
		<u>\$ 1,292 58</u>	<u>\$ 1,292 58</u>





HOSE 9 HOUSE, LINCOLN STREET



## SUMMARY OF RECEIPTS AND EXPENDITURES

APPROPRIATION TITLE	Carried Over From 1911	Original Appropriation	Receipts and Transfers	Total Appropriation	Total Expenditures	Balances
(Regular Appropriations)						
Buildings—Office Salaries and Wages		\$14,000 00	\$ 1,917 66	\$ 15,917 66	\$ 15,917 66	.....
Buildings—Other Expenses	\$ 500 00	7,000 00	2,559 74	10,059 74	10,059 74	.....
Rifle Range—Wages		628 00		628 00	628 00	.....
Rifle Range—Other Expenses	131 48	372 00		503 48	497 37	6 11
School Houses—Wages		12,000 00	526 70	12,526 70	10,235 22	2,291 48
School Houses—Other Expenses		9,000 00	209 24	9,209 24	8,452 83	756 41
(Special Appropriations)						
Fire Houses Repairs	608 55			608 56	608 55	01
Fire Houses Improvements		7,000 00	796 41	7,796 41	7,157 37	639 04*
Rifle Range Improvements		3,000 00		3,000 00	2,260 09	739 91*
Erection of City Stable		35,000 00		35,000 00	33,614 55	1,385 45*
City Hospital Repairs		1,292 58		1,292 58	52 20	1,240 38*
Comfort Station		22,000 00		22,000 00	6,821 31	15178 69*
Rebuilding Race St. Fire House	5,833 07			5,833 07	5,036 66	796 41
Totals.....	\$ 7,073 10	\$111,292 58	\$ 6,009 75	\$124,375 43	\$101,341 54	23,033 89

\*Balance carried forward to 1913

## Repairs and Improvements

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It is practically impossible to give a detailed account of the work done in this department during the year, but in the brief synopsis of the work which follows a general idea of some of the improvements made in our public buildings may be gained. Considering the amount of money appropriated, I feel a great deal has been done and more work accomplished with a given sum of money than ever before.

**City Hall**—The Commissioner of Streets and Highway's suite of offices have been kalsomined, painted and varnished; much of the furniture in these offices has been scraped and refinished, the oak counter has been moved to the largest office and an addition several feet in length has been built to it.

The offices of the Engineers have been kalsomined and varnished; and the room used by the engineers in the basement has been converted into a private room for the char-women and has been painted and varnished. A new testing room has been built on the fourth floor.

In the Solicitor's offices an oak book case and rail has been built. The ceilings and walls have been painted and the woodwork varnished.

The private office of Commissioner of Water Works and Fire Protection has been varnished and kalsomined, double windows and awnings have been provided.

The ceilings and walls of the Assessors' offices have been kalsomined and the woodwork varnished.

An addition has been built to the counter in the Buildings Department office. Nine large racks were built for the Registrars of Voters. The offices of the

Park Commission and the School Board have been kalsomined and varnished, the system of lighting in the assembly room of the School Board has been changed; the furniture in this room has been renovated and several desks, tables, and chairs belonging to other departments have been scraped and refinished; also an oak case was built for the Park Department.

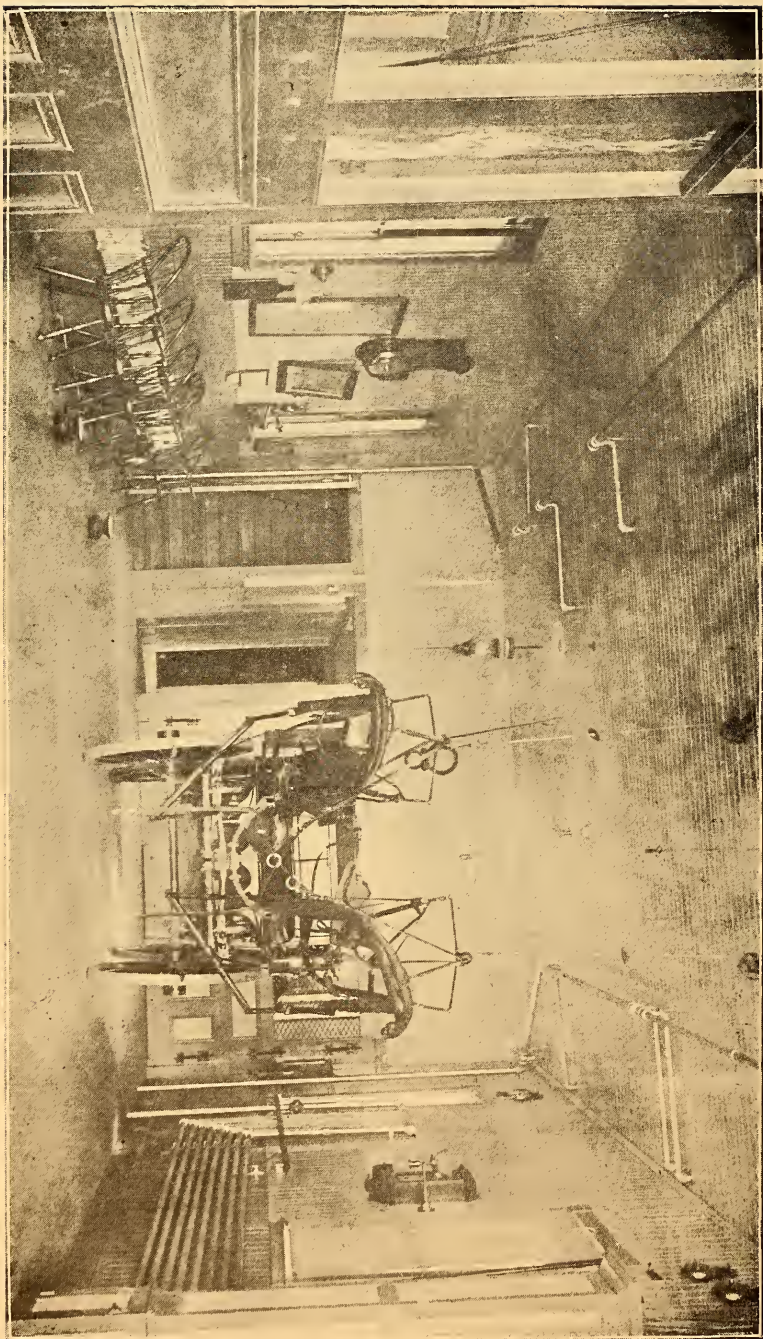
In the basement a large tank has been erected, on concrete base, to receive the return water and reheat it before passing back to the boilers. This arrangement will make it possible to run the boilers with less coal than in former years making a saving of one hundred tons of coal each year.

All the exterior woodwork has been painted, the doors at main entrance have been changed to swing out, and all outside doors have been refinished.

**City Hospital (Chelmsford St.)**—A fire destroyed the large barn which served as quarters for both the cows and horses, and also extensively damaged the large storehouse adjoining the barn. The storehouse has been repaired. The sheds forming the upper part of the piggery have been fitted up as temporary quarters for the cows and horses, and while this is only a makeshift it furnishes a place where they are well housed until such time as a modern barn can be built. A one story shed with flat roof, to be used for storage of tools, etc., has been built on the foundation of the old barn. The old silo which was damaged by fire has been repaired and a new one hundred ton silo built. The basement of the horse barn has been fitted up for breeding quarters with three large pens and tie up for ten head of young cattle. The floor of this part has been cemented.

In the main buildings much has been done in the line of ordinary repairs, too numerous to mention in detail, but it might be mentioned that the ceilings of





HOSE 9 HOUSE APPARATUS ROOM



eight rooms and hallways have been kalsomined and the walls and woodwork painted; four rooms in the Superintendent's quarters have been papered. The walls have been painted and ceilings kalsomined in the dining rooms. The exterior of the storehouse and silos have been painted. Extensive plumbing, heating and electrical repairs have been made.

**Edson Cemetery**—The office building has been moved to the new gateway, a new foundation built and the building enlarged to about twice its original size. A fireproof record vault with double steel door has been built in one corner of the building. The main office has been refinished, new floors laid, a counter and office rail built, a private office partitioned off and the old office changed over into a public waiting room. The building has been wired for electricity. The interior and exterior of the entire building has been painted or varnished, all iron work bronzed or painted, including the new iron gates at entrance. The interior woodwork in the chapel has been varnished and the exterior woodwork painted.

**City Stables**—New window frames, stalls repaired, the interior finish repaired, ventilators rebuilt. The exterior of all the buildings have been painted two coats. In the sewer department the chimney has been rebuilt, the windows repaired and the fence and gates rebuilt.

**Board of Health**—The old buildings formerly used by this department as a stable, blacksmith shop and repair shops have been torn down and a modern brick stable erected to take their place, with forty-six stalls, box-stalls, hay and grain loft, also office and repair shops.

**Police Station**—Whitewashed boiler room, repaired brick work on boiler, repaired city scales, built a large case on third floor for court records; stairway varnished. Repairs and alterations made to garage. General repairs throughout building.

**Rifle Range** - Extensive improvements have been made in accordance with recommendations received from the Chief of Ordnance of the M. V. M. The old wooden barricades in front of the five hundred yard and six hundred yard firing points and the one between the five hundred yard and six hundred yard ranges have been removed and cement concrete ones erected in their places. The faces of these barricades are covered with plank.

The five hundred yard and six hundred yard ranges have been enlarged and stone retaining walls built. A concrete curbing has been built at each firing point and the ground within the enclosure leveled off with sand. The target pit has been enlarged forty feet to allow for four new targets for the six hundred yard range. This pit is also built of concrete and roofed over. New covers have been built on roof of the target pit as a protection to targets. The bank in front and in rear of the pit has been sodded to prevent ricochet shots.

The range house has been leveled up and additional brick piers built to take the place of old wooden post supports. All new woodwork has been painted.

**Engine 1 House**—Stalls repaired.

**Engine 2 House**—General repairs only.

**Engine 3 House**—Repaired stalls and floors, new entrance doors on truck side; refinished floor in chief's office; painted stairway; painted exterior woodwork of entire



building. Closed window openings in west wall of water tower section; extensive repairs to roof of this section.

**Engine 4 House**—Repairs to stalls, windows, doors and piazza.

**Engine 5 House**—Painted and varnished entire building inside with the exception of attic, and painted all exterior woodwork. General carpenter repairs.

**Engine 6 House**—Painted ceilings and walls and varnished woodwork in sitting room, bathroom, apparatus room and stable; bronzed steam pipes and radiators; painted the exterior woodwork. General carpenter repairs; new floor in tower.

**Hose 7 House**—Most of the expense charged to this house is for work started the previous year when the second story was divided into separate rooms. In addition to this the stalls have been repaired, a case built for the bathroom and new screens made for all the windows.

**Hose 8 House**—This building is entirely new having been rebuilt the previous year and was practically finished when I assumed charge of the department there only remained for me to see that the contracts previously started were completed in a satisfactory manner.

During the present year, however, several new closets have been built; the building has been provided with screens; the top of the tower has been repointed and an appliance installed therein for the purpose of drying the hose. The basement has been white-washed. New fences and gates have been built on Merrimack and Race Street property lines.

**Hose 9 House**—This building has been entirely renovated; an addition twelve feet by twenty-four feet, two stories in height, has been built to the front and the second story divided into separate rooms. The addition has made it possible to finish six good sized rooms and bath on second floor and enlarge the apparatus room on first floor which previously had been very small. The steam piping has been changed and several sections of radiation added. The bathroom fixtures have been reset and a new shower and needle bath installed. The bathroom floor, wainscotting and shower compartment has been finished in karbolith.

In the basement a watercloset has been installed for the convenience of the public and the ceiling and walls of this part of the building has been white-washed. The entire inside of the building has been painted and varnished and the outside has been painted two coats.

The building has been wired for electricity and a new automatic switch connected with the alarm system controls the lighting and lights up the entire building at the first stroke of the bell.

**Hose 10 House**—Like Hose 9 House this building has undergone a complete alteration. The second story has been divided into ten separate rooms for the members of both companies occupying this house. The stairway leading to the room formerly used as a ward room has been closed and the the room itself has been divided and made a part of the company quarters. The bathroom in this building is without doubt the best in the city, the walls wainscotting and shower compartment are finished in karbolith. The steam piping has been changed and radiators have been placed in each room. The building has been wired for electricity in the same manner as Hose 9

House. A new gutter has been placed on the east side of the building and the entire interior of the building and the exterior woodwork has been painted.

**Hose 11 House**—Stalls have been repaired. Window screens have been renewed and painted.

Only general repairs have been made in the other fire houses.

**Bartlett School (Old)**—The floors of half of the first story has been strengthened by placing underlayers and posts under them in the basement. The woodwork in the toilets has been painted.

**Bartlett School (New)**—In the teachers' room and toilets the walls have been painted, the ceilings kalsomined and the woodwork varnished. Relaid sewer pipe in school yard. Repaired the fence, watercloset seats, etc. Roofing, heating and general repairs.

**Butler School**—Doors and windows repaired. The boiler and heating system has been repaired. The basement whitewashed and the woodwork painted and varnished; also the screens and iron pipes have been painted.

**Colburn School**—The basement and fences have been repaired and painted. New checks for the outside doors. The doors and outside steps have been repaired. Stone retaining wall on the north side of lot has been pointed.

**Edson School**—New windows have replaced the old ones in the basement and a concrete area has been built along the outside of the same. Fences, doors and windows have been repaired. Painted and kalsomined one classroom.

**Franklin School**—Parts of five rooms have been kalsomined. All iron work, basement and janitor's room has been painted. Repairs were made to doors, coalbin and wheel on bell. The basement wall was pointed up and holes in wall were filled in. Concrete walk laid in yard. The roof repaired.

**Green School**—Painted and stippled borders in all corridors. Iron fence and gate repaired.

**Greenhalge School**—Extensive heating and plumbing repairs were made in this building; several sections of cracked radiation being removed and new sections installed. The doors and large porch were painted. Windowstools and sills and back vestibule have been shellaced and varnished.

**High School**—Repaired all fences and gates and also painted them. All outside doors, screens and iron work have been painted. The furniture throughout the building has been repaired and refinished making same practically as good as new.

General repairs to heating system, plumbing and roofing.

**High School Annex**—The armature on the motor operating the ventilating fan has been rewound. General repairs throughout building.

**Highland School**—Built new fence on boys' side of grounds and also painted the same. A cement curbing two hundred twenty-five feet long, ten inches high, and nine inches thick, with tar concrete gutter along the side, was built on the rear line of lot to prevent surface water from running onto adjoining property. Doors, windows, ventilators, and roof were repaired.

**Lincoln School**—Built an addition to janitor's room; removed partition on second floor, thereby making a classroom of two small rooms. Kalsomined and painted new classroom. Basement whitewashed.

**Moody School (new)**—Extensive repairs to furnaces and Fuller & Warren dry closets. Wire fence built around lawn. Vestibule painted.

**Moody School (old)**—New gravel roof on ell. New water-closet seats, and partitions in waterclosets rebuilt; all doors and windows repaired; new treads on basement stairs. The basement wall has been pointed and the floor under toilets has been concreted. The basement has been painted and whitewashed.

**Mann School**—Extensive repairs were made in this old building. The old waterclosets were removed and modern ones installed in their place. The basement has been entirely renovated, a partition being built separating the boiler room from the rest of the basement; all dirt has been removed and the ceiling and walls whitewashed; new windows with concrete areas were built rendering better ventilation and making the basement clean and wholesome. The plastered walls in the classrooms and corridors were whitewashed; a large auto door was cut in the Little Street side of the building for the automobile department of the Industrial School.

**Pawtucket School**—Removed paper from walls and ceiling of Master's room and kalsomined same. New "Neolithic" floor laid in this room and woodwork painted. Bronzed steam pipes, radiators, and gas fixtures in entire building.

**Riverside School**—Yard graded. New return pipe from boiler; basement concreted; brickwork around boiler rebuilt. General repairs.



**Varnum School**—The corridors and part of four rooms were kalsomined. The floors in the Master's and teachers' rooms have been varnished. The doors and windows repaired. Extensive heating and roofing repairs.

**Washington School**—Painted and varnished basement and painted all steam pipes and iron work. Shellaced and varnished new door and casing in classroom. New door in partition between principal's room and corridor. General repairs.

**Agawam Street School**—Boiler was retubed. New water-closet installed; roofing repaired; cellar walls and ceiling whitewashed; repaired coal bin, fences, floor in porches, etc.

**Ames Street School**—The outside of this building has been painted; the basement woodwork has also been painted and varnished. Previous to painting, the building was extensively repaired, inside and out; the windows, doors, clapboards, and fences being repaired and renewed.

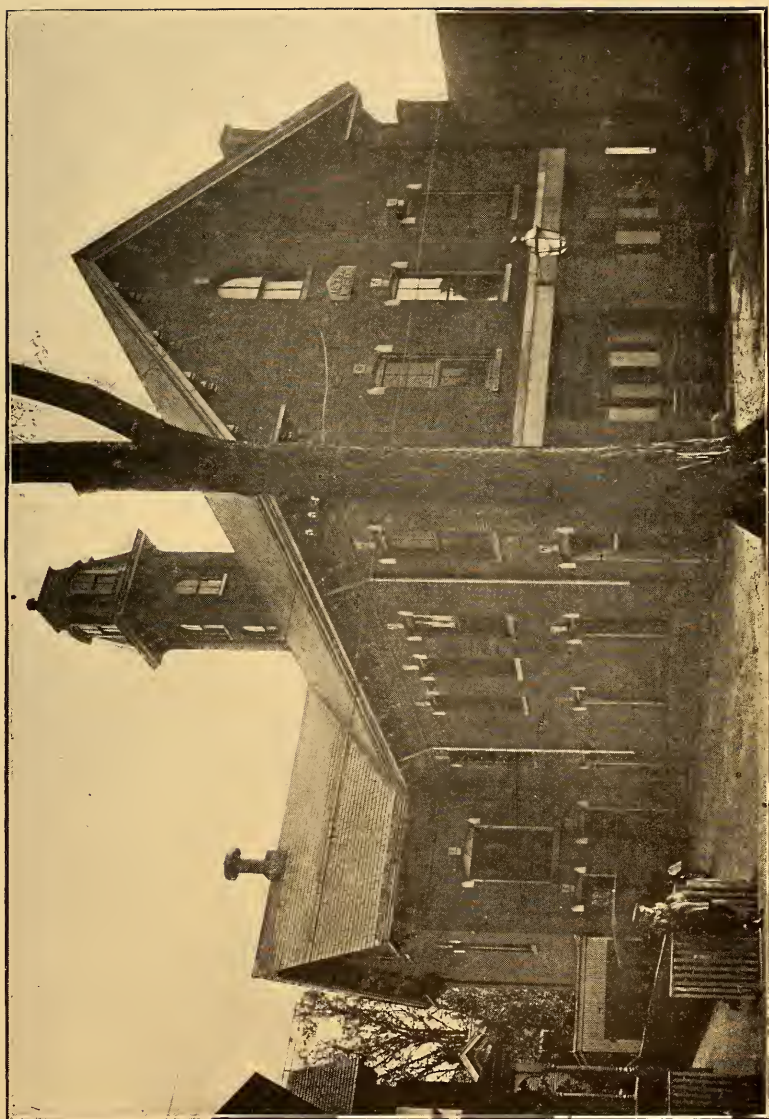
**Billings Street School**—Repaired dry closets and interior wood-work.

**Carter Street School**—Dry closets have been repaired; the doors and windows throughout the building repaired. The plastering has been patched in several places.

**Charles Street School**—New window sash in basement. Piazza repaired. Painted basement.

**Central Street School**—Concrete floor in basement.

**Colburn School (Primary)**—Repaired and painted waterclosets, doors, windows, clapboards, fences, etc. Repaired roofing.



HOSE 10 HOUSE ON FOURTH STREET





**Cottage Street School**—Built two new door hoods over side entrances; repaired fences. Painted and varnished class rooms, hallways, and basement. Bronzed all steam pipes, and painted the outside of building and the fences. Improved the heating system.

**Chapel Street School**—Kalsomined, painted, and varnished the entire building inside and bronzed all steam pipes.

**Dover Street School**—Dug up the sewer and relaid it. Roofing and plumbing repaired.

**High Street School**—Painted and whitewashed basement Doors and windows repaired.

**Howard Street School**—Kalsomined, painted, and varnished the entire building. Repaired fences and interior woodwork. Patched plastering.

**Kirk Street School**—Repaired furnace, gutter on Lee Street side and fence. Painted outside woodwork.

**Lakeview Avenue School**—New flooring in four corridors and treads on stairs. Repaired doors and windows.

**Lexington Avenue School**—Repaired furnaces and fixed up coal bin.

**Lyon Street School**—Plastering patched; furnace repaired, general repairs.

**Moody Street School**—Kalsomined one classroom; refinished floor in teacher's room; painted and varnished basement and kalsomined stairway to basement. Four hundred feet of indirect radiation installed.

**Middlesex Village School**—Kalsomined one classroom and part of corridor; repaired tin roof on belfry; rebuilt rail on belfry. Repairs to heating system; boiler retubed.

**Morrill School**—Petitioned off classroom, cutting doorway from classroom to dressing room. Grained and varnished petition. Relaid sewer and cemented floor in basement. Installed three pipe circulation in assembly hall and sinks and plumbing in cooking room.

**Oakland School**—Kalsomined and varnished basement, stairways, and painted woodwork and whitewashed walls in basement. Repaired windows in attic and rebuilt bulkhead cover. Repairs to plumbing and heating.

**Pine Street School**—Repaired furnaces and dry closets. Roofing repaired.

**Plain Street School**—Painted, varnished, and whitewashed basement. Repaired front steps and windows.

**Pond Street School**—Painted and varnished hallways and basement; whitewashed walls in basement. Repaired windows, doors, and closets.

**School Street School**—Built new fence in front and painted same.

**Tenth Street School**—Paved yard for coal team driveway. Rebuilt basement steps; repaired windows, concrete walk in yard. Heating and roofing repairs.

**Weed Street School**—Repaired exterior; removed the old paint on front of building and painted same two coats. Repaired all doors, windows, etc., new screens for windows; rebuilt fences. Installed new boiler to replace old one that was condemned by Insurance Company.

**West Sixth Street School**—New cellar windows; new steps to side entrance and new basement doors. Painted boiler room and basement windows, porches, steps and doors.

## Summary of Expense

The preceding pages have given you a brief outline of the most important items of work done by this department and naturally you are curious to know the amount spent on each building or group of buildings. In other words just what did it cost to take care of our public buildings?

It would take many pages to tell everything that has been done and what it cost to do it, but again we will be obliged to summarize and in a brief way give the information.

Therefore in giving the amount spent on each building, I shall not give the separate charges against each appropriation but will give the total amount spent from all appropriations during the year.

### PUBLIC BUILDINGS

Ambulance Stable .....	\$ 52 01
Board of Health Stables, etc., .....	33,795 20
Carpenter Shop.....	442 74
City Hall .....	3,506 64
City Hospital .....	4,242 27
City Stables .....	1,059 31
Edson Cemetary .....	2,349 55
Lighting Station ...	39 52
Memorial Building .....	814 06†
Police Station Stable.....	2,544 22†
Rifle Range.....	4,003 94†
Comfort Station.....	6,821 94

†Janitor service included in these items.

### FIRE ENGINE HOUSES

Engine 1 .....	\$ 56 44
Engine 2 . . .	96 24
Engine 3, Central Fire Station.....	897 12
Engine 4 .....	96 56

Engine 5 .....	236 05
Engine 6 .....	411 93
Engine 7 .....	1,056 96
Hose 8 .....	5,124 44
Hose 9 .....	3,672 51
Hose 10.....	3,158 31
Hose 11 and Truck 1.....	136 31
Hose 12 and Truck 4.....	126 64
Truck 2 and Chemical.....	48 00
Protective 1 .....	9 32

## SCHOOL HOUSES

### GRAMMAR AND HIGH SCHOOL BUILDINGS

Bartlett, (New).....	\$ 453 50
Bartlett, (Old).....	170 57
Butler .....	409 30
Colburn.....	330 02
Edson .....	313 81
Franklin.....	444 53
Green.....	128 27
Greenhalge.....	825 92
High.....	1,075 44
High Annex .....	246 73
Highland .....	439 14
Lincoln.....	560 12
Moody (New).....	361 58
Moody (Old).....	630 23
Mann.....	1,108 64
Pawtucket.....	143 11
Riverside .....	374 41
Varnum .....	459 17
Washington .....	460 16

### PRIMARY SCHOOL BUILDINGS

Agawam Street.....	\$ 206 24
Ames Street.....	481 75
Billings Street .....	156 10
Cabot Street .....	84 82
Carter Street .....	155 40
Central Street.....	73 16
Chapel Street... ..	157 77
Charles Street.....	133 42

Colburn Primary.....	135 76
Cottage Street.....	398 36
Cross Street.....	24 68
Dover Street.....	157 42
Favor Street.....	91 88
Fayette Street.....	11 06
Grand Street .....	35 46
High Street.....	122 17
Howard Street.....	173 99
Kirk Street.....	99 34
Lakeview Avenue.....	169 48
Lexington Avenue .....	81 57
London Street .....	46 13
London Street Annex.....	18 13
Lyon Street .....	168 70
Mammoth Road Kindergarten.....	22 35
Middlesex Village. ....	344 46
Moody Street .....	288 11
Morrill School.....	465 47
Oakland School .....	236 48
Pine Street .....	164 40
Plain Street (Laura E. Lee).....	189 99
Pond Street .....	119 42
Powell Street.....	35 60
School Street .....	76 53
Tenth Street .....	558 97
Weed Street .....	660 60
West Sixth Street.....	206 28
Worthen Street ..	122 03

## MISCELLANEOUS EXPENSES

Coffins.....	\$ 369 01
Office Supplies .....	286 91
Transportation charges.....	3257 43
General Supervision and clerical work .....	6236 20
Teaming and shop work ..	1989 34

## Contracts and Agreements

The following work was open to competition:

### CITY HALL—

Changing sink from old to new testing room.

Barker, H. R. Mfg. Co.....	\$47 00
Farrell & Conaton.. .. .	45 00
Gaffney & Kerwin .....	50 00
Scott & O'Day Co.....	68 00
Shaw, E. T. Co.....	41 00
Welch Bros. ....	60 00

Awarded to E. T. Shaw Co.

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### GREENHALGE SCHOOL—

Installing additional indirect radiation

Barker, H. R. Mfg. Co.....	\$133 00
Cotter, John & Co. ....	149 00
Desmarais & Bourette.....	138 00
Farrell & Conaton .....	145 00
Gaffney & Kerwin .....	140 00
Shaw, E. T. Co. ....	140 80
Scott & O'Day Co. ....	128 00
Welch Bros. ....	144 00

Awarded to Scott & O'Day Co.

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### TENTH STREET SCHOOL—

Two radiators in corridor.

Barker, H. R. Mfg. Co.....	\$58 00
Cotter, John & Co. ....	71 00
Farrell & Conaton .....	63 00
Gaffney & Kerwin .....	68 00
Shaw, E. T. Co. ....	59 00
Scott & O'Day Co. ....	65 00
Welch Bros. ....	70 00

Awarded to H. R. Barker Mfg. Co.



## HOSE 10 HOUSE, FOURTH STREET— (Bids opened May 25)

Steam piping for separate sleeping rooms.

Barker, H. R. Mfg. Co.....	\$198 00
Cotter, John & Co. ....	318 00
Chisholm Plumbing & Heating Co.....	367 00
Curtin & Spillane .....	217 00
Farrell & Conaton .....	263 00
Hanchett, Charles & Co. ....	348 00
Leary, D. J. ....	450 00
Shaw, E. T. Co. ....	217 00
Scott & O'Day Co. ....	340 00
Welch Bros. ....	210 00

Awarded to H. R. Barker Mfg. Co.

## HOSE 10 HOUSE, FOURTH STREET— (Bids opened May 25)

Plumbing—setting bath room fixtures and furnishing new shower.

Barker, H. R. Mfg. Co.....	\$220 00
Cotter, John & Co. ....	238 00
Chisholm Plumbing & Heating Co.....	318 00
Curtin & Spillane .....	167 00
Drury, John E. ....	165 00
Farrell & Conaton .....	177 00
Gaffney & Kerwin .....	180 00
Scott & O'Day Co. ....	249 00
Shaw, E. T. Co....	152 00
Welch Bros. ....	170 00

Awarded to E. T. Shaw Co.

## HOSE 10 HOUSE, FOURTH STREET— (Bids opened May 25)

Electric Wiring.

Quinn Bros. ....	\$180 00
Tucke & Parker Co. ....	181 00

Awarded to Quinn Bros.

HOSE 9 HOUSE, LINCOLN STREET— (Bids opened June 4)  
Foundation for addition.

Bibeault, E. ....	\$150 00
Connor Bros. Construction Co. ....	156 00
Fuller, William H. ....	137 00
Awarded to William H. Fuller	

HOSE 10 HOUSE, FOURTH STREET— (Bids opened June 19)  
Plastering.

Connor, Matthias F. ....	\$175 00
Crosby, B. F. & Co. ....	500 00
Martin, Joseph ....	296 00
Awarded to M. F. Connor.	

HOSE 9 HOUSE, LINCOLN STREET  
Roofing addition.

Burns, James & Son. ....	\$65 00
Douglass, J. L. & Co. ....	60 00
Awarded to J. L. Douglass & Co.	

HOSE 10 HOUSE, LINCOLN STREET  
Karbolith floor and wainscoting in bath room.  
Awarded to American Mason Safety Tread  
Co., only bid received .....

\$152 90

HOSE 9 HOUSE, LINCOLN ST.,—(Bids opened July 20.)  
Electric wiring.

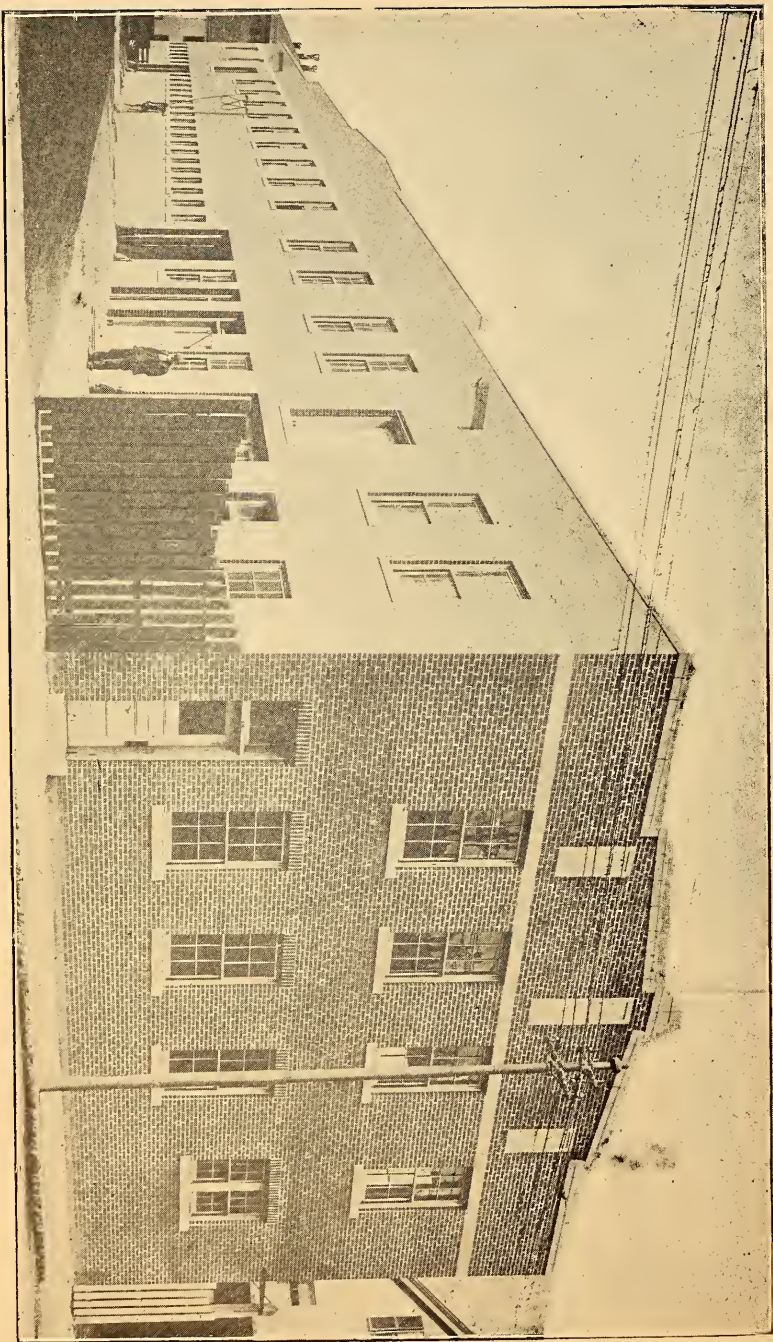
Awarded to James McElholm, (only bid received) .....	\$110 00
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HOSE 9 HOUSE, LINCOLN ST., (Bids opened July 20.)  
Plastering.

Awarded to Matthias F. Connor, (only bid received) .....	\$120 00
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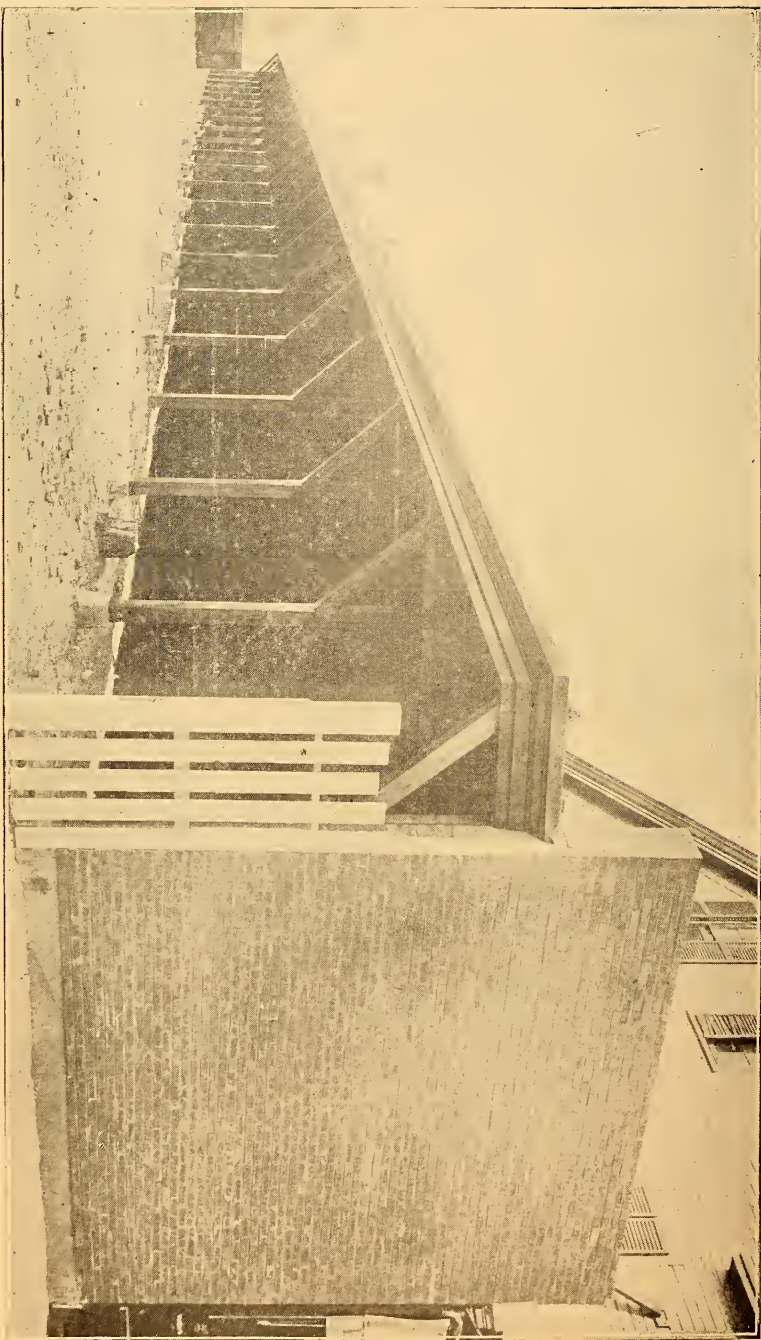


HEALTH DEPARTMENT NEW STABLE









HEALTH DEPARTMENT NEW WAGON SHED

Permission granted by Municipal Council, August 20, 1912, for the following work.

CARPENTER SHOP—

Scannell Boiler Works, retubing boiler ....	\$108 00
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MIDDLESEX VILLAGE SCHOOL—

Scannell Boiler Works, retubing boiler ....	\$120 00
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AGAWAM STREET SCHOOL—

Scannell Boiler Works, retubing boiler ....	\$63 00
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WASHINGTON SCHOOL—

Electric Bells.

L. A. Derby & Co. ....	\$149 25
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Permission granted by Municipal Council, Aug. 16, 1912

BOARD OF HEALTH STABLE—(Bids opened Aug. 5, 1912.)

General Contract.

Connors Bros. Construction Co. ....	\$ 29,388 00
Conlon, Patrick.....	31,975 00
Drapeau, William.....	30,955 00
O'Hearn, Patrick .....	31,980 00
Penn, William H. ....	32,251 00
Twohey, Edward G. ....	31,328 36
Walker, Daniel H. ....	29,600 00
Wiggin, Burton H. Co. ....	33,410 00

Awarded to Daniel H. Walker.

(Connors Bros. Construction Co. would not sign contract to complete work within the specified time.)



BOARD OF HEALTH STABLE—(Bids opened Aug. 5, 1912.)

Plumbing.

Barker, H. R. Mfg. Co. ....	\$ 1,800 00
Carroll Bros. ....	2,100 00
Costello, T. & Co. ....	1,598 00
Chisholm Heating and Plumbing Co. ....	2,435 00
Drury, John E. ....	1,898 00
Farrell & Conaton ....	1,587 00
McMahon, J. F. & Co. ....	2,375 00
Shaw, E. T. Co. ....	1,792 00
Scott & O'Day Co. ....	1,630 00
Welch Bros. ....	1,983 00
Wilder, H. H. & Co. ....	2,115 00

Awarded to Farrell & Conaton.

BOARD OF HEALTH STABLE—(Bids opened Aug 5, 1912.)

Heating.

Barker, H. R. Mfg. Co. ....	\$ 598 00
Carroll Bros. ....	622 00
Chisholm Heating and Plumbing Co. ....	950 00
Cotter, John A. & Co. ....	690 00
Farrell & Conaton ....	640 00
Leary, Daniel J. ....	592 00
Shaw, E. T. Co. ....	648 00
Scott & O'Day Co. ....	690 00
Welch Bros. ....	510 00

Awarded to Welch Bros.

HOSE 9 HOUSE, LINCOLN ST.,—(Bids opened Aug. 21, 1912.)

Steam Piping and Plumbing.

Barker, H. R. Mfg. Co. ....	\$ 374 00
Carroll Bros. ....	374 00
Chisholm Heating and Plumbing Co. ....	458 00

Cotter, John A. & Co. ....	390 00
Farrell & Conaton .....	432 00
Gaffny and Kerwin .....	358 00
Hanchett, Charles H. & Co.....	339 00
Welch Bros. ....	345 00

Awarded to Charles H. Hanchett & Co.

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PUBLIC COMFORT STATION, PAIGE ST.—(Bids  
opened Sept. 3, 1912.)

General Contract.

Drapeau, William....	\$ 19,563 00
Connors Bros. Construction Co.....	19,200 00
Conlon, Patrick ....	17,000 00
Walker, Daniel H. ....	19,500 00

Awarded to Patrick Conlon.

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PUBLIC COMFORT STATION, PAIGE ST.—(Bids  
opened Sept. 3, 1912.

Plumbing.

Barker, H. R. Mfg. Co. ....	\$ 2,700 00
Carroll Bros. ....	2,400 00
Chisholm Plumbing and Heating Co. ...	2,750 00
Costello, T. & Co. ....	3,118 00
Curtin and Spillane .....	3,187 00
Drury, John E. ....	2,415 00
Farrell & Conaton .....	2,400 00
Gaffny & Kerwin .....	2,336 00
Hanchett, Charles H. & Co.....	3,790 00
McMahon, J. F. & Co. ....	2,850 00
Scott & O'Day Co. ....	2,238 00
Welch Bros. ....	2,612 00
Wilder, H. H. & Co. ....	2,890 00

Awarded to Scott & O'Day Co.

PUBLIC COMFORT STATION, PAIGE ST.,—Bids  
opened, Sept. 3, 1912.)

Heating System.

Barker, H. R. Mfg. Co.....	\$ 298 00
Carroll Bros. ....	300 00
Cotter, John A. & Co. ....	427 00
Chisholm Plumbing and Heating Co ....	286 00
Farrell & Conaton ....	244 00
Leary, Daniel J. ....	365 00
Scott and O'Day Co.....	300 00
Welch Bros. ....	370 00

Awarded to Farrell & Conaton.

EDSON CEMETERY—(Bids opened Sept. 11, 1912.)

Foundation for Office Building.

Barton, Cyrus .....	\$ 600 00
Connors Bros. Construction Co. ....	420 00
Conlon, Patrick .....	500 00
Fuller, William H. ....	289 00
Walker, Daniel H. ....	555 00

Awarded to William H. Fuller.

MANN SCHOOL—(Bids opened Sept. 20, 1912).

Water Closets.

Barker, H. R. Mfg. Co.....	\$300 00
Costello, T. & Co.....	248 00
Curtin & Spillane .....	277 00
Gaffny & Kerwin .....	255 00
Hanchett, Charles & Co.....	281 00
Leary, Daniel J. ....	283 00
McMahon, J. F. & Co.....	330 00
Mullaney, J. J. & Co .....	328 00
Scott & O'Day Co. ....	284 00
Welch Bros. ....	284 00

Awarded to T. Costello & Co.

## MORRILL SCHOOL— (Bids opened Sept. 23, 1912)

Hot Water Boiler, Sinks, etc.

Barker, H. R. Mfg. Co.....	\$134 00
Leary, Daniel J. ....	160 00
Awarded to H. R. Barker Mfg. Co.	

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## EDSON CEMETERY— (Agreement Oct. 29, 1912)

Electric wiring for office.

Tucke & Parker.....	\$87 00
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## CITY HOSPITAL— (Bids opened Nov. 14, 1912)

Roofing on section of storehouse damaged by fire.

James Burns & Son .....	\$125 00
J. L. Douglass & Co. ....	100 00
James F. Mooney .....	75 00

Awarded to James F. Mooney.

## RIFLE RANGE— (Agreement Nov. 14, 1912)

Repairing roof of pit and new roof on addition to pit.

Frank L. Weaver & Son.....	\$75 00
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## SCHOOL HOUSES— (Agreement Nov. 29, 1912)

Repair roof of the following buildings:

Lincoln School.....	\$30 00
Cottage Street School .....	25 00
Riverside Street School.....	20 00
<hr/>	
James Burns & Son .....	\$75 00

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## BOARD OF HEALTH STABLE—(Agreement Nov. 13, 1913)

Change 4" soil pipe to 5", for stall drain.

Farrell & Conaton.....	\$45 00
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BOARD OF HEALTH STABLE—(Agreement December 19, 1912.)

Installing flush lines at end of soil drain from stalls.  
Farrell & Conaton..... \$ 25 00

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BOARD OF HEALTH STABLE—(Agreement December 23, 1912.)

Electric Wiring.  
Tucke & Parker Co. .... \$68 00

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BOARD OF HEALTH STABLE—(Agreement December 27 1912.)

Installing Tungsten Lamps.  
Tucke and Parker Co..... \$18 95

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OLD MOODY SCHOOL(Agreement Dec. 19, 1912.)

New grates for boiler.  
Scannell Boiler Works..... \$ 40 00

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BOARD OF HEALTH STABLE—(Permission granted by the Municipal Council, December 19, 1912.)

Strengthening posts.  
Daniel H. Walker... .. \$244 20

## Valuation of Public Buildings, Fire Houses, and School Houses

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City Hall, granite.....	\$ 410,000
Memorial Building, granite .....	200,000
Police Station, Stable, Etc., brick .....	98,000
Lighting Station, Willie Street, wood.....	3,000
City Stable, Board of Health stable, Car- penter Shop, Ambulance Stable, Shed, Broadway, stone, brick, wood.....	135,000
City Hospital, brick and wood .....	200,000
Rifle Range, wood.....	16,000
	\$ 1,062,000

### FIRE DEPARTMENT

Engine 1, Gorham Street, brick.....	27,000	
Engine 2, Branch Street, brick.....	22,000	
Engine 3, Palmer Street, (Central Fire Station,) brick .....	90,000	
Engine 4, High Street, brick ... ..	24,000	
Engine 5, Mammoth Road, brick.....	15,500	
Engine 6, Fletcher Street, brick .....	18,000	
Hose 7, Central Street, brick.....	13,000	
Hose 8, Merrimack Street, brick.....	23,000	
Hose 9, Lincoln Street, wood.....	9,000	
Hose 10, Fourth Street, brick .....	18,000	
Hose 11 and Truck 1, Lawrence St., brick	26,000	
Hose 12, and Truck 4, West Sixth St., brick	38,000	
Truck 2 and Chemical, Westford Street, brick .....	18,000	
Protective 1, Warren Street, brick .....	14,000	355,500
Carried forward .....		\$ 1,417,500

Brought forward.... \$ 1,417,500

## GRAMMAR AND HIGH SCHOOLS

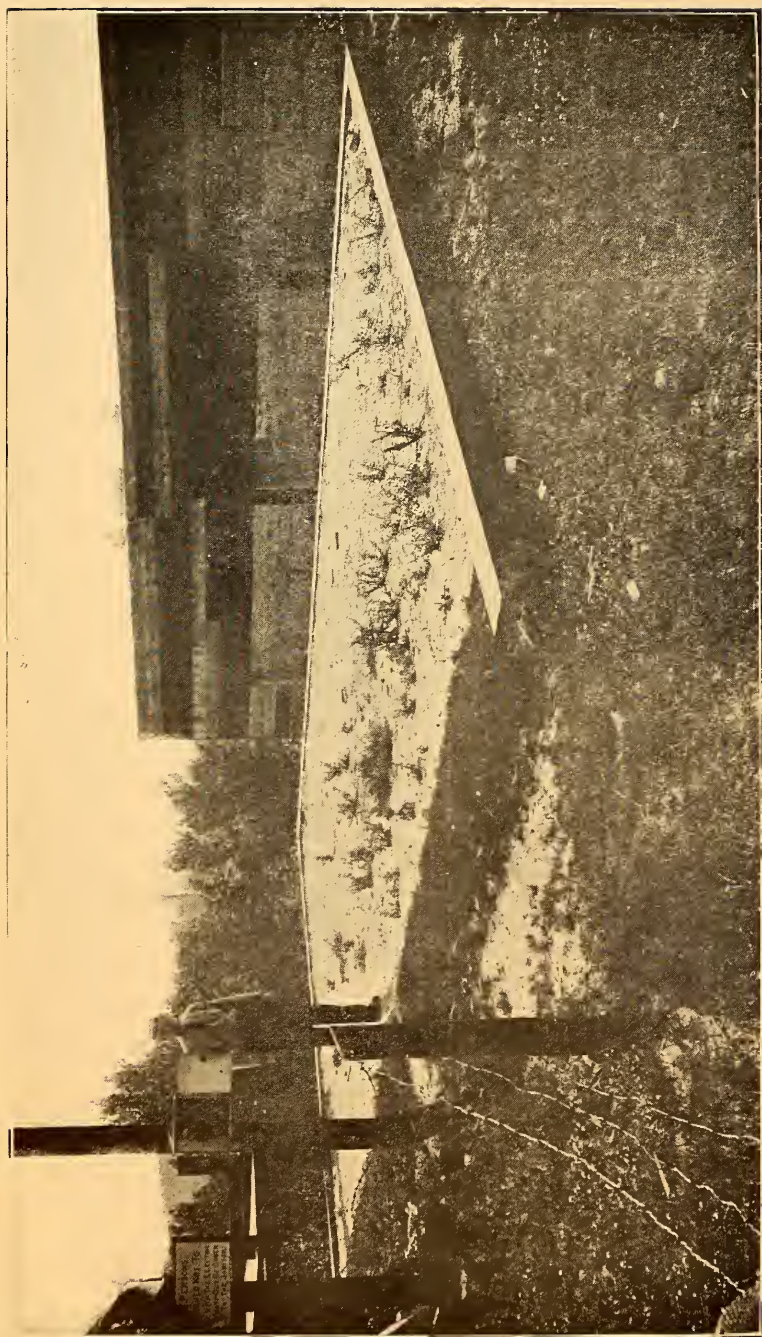
High, Kirk and Anne Streets, brick, 20 rooms and hall.....	250,000	
High Annex, John and Paige Streets, brick 16 rooms and drill hall .....	105,000	
Bartlett (old), Clarke Street, brick, 8 rooms	25,000	
Bartlett (new), Wannalancit Street, brick, 16 rooms and hall .....	108,000	
Butler, Gorham St., brick, 12 rooms and hall	63,000	
Colburn, Lawrence Street brick, 8 rooms ..	25,000	
Edson, Highland Street, brick, 11 rooms...	25,000	
Franklin, Branch Street, brick, 8 rooms. .	25,000	
Green, Merrimack Street, brick, 10 rooms and hall ....	105,000	
Greenhalge, Ennell Street, brick, 10 rooms and a hall.....	75,000	
Highland, Pine Street, brick, 12 rooms and hall.....	67,000	
Lincoln, Chelmsford Street, brick, 12 rooms and hall .....	77,000	
Moody, (Old) East Merrimack Street, brick wood ell, 10 rooms .....	20,000	
Moody, (New) Rogers Street, brick, 12 rooms and hall.....	80,000	
Mann, Broadway, brick, 8 rooms brick, 12 rooms wood.....	25,000	
Pawtucket, Mammoth Road, brick, 8 rooms and hall.....	53,000	
Riverside, Woburn Street, wood, 8 Rooms.	35,000	
Varnum, Myrtle Street, brick, 17 rooms and hall.....	110,000	
Washington, Lang Street, brick, 10 rooms and hall .....	90,000	\$ 1,363,000

## PRIMARY SCHOOLS

Agawam Street, wood, 4 rooms ...	9,000	
Ames Street, wood, 4 rooms.....	9,500	
Billings Street, wood, 4 rooms .....	16,000	
Central Street, wood, 4 rooms.....	13,500	
Cross Street, brick, 4 rooms.....	24,000	
Carter Street, brick, 8 rooms and hall ....	52,000	
Amounts carried forward,.. ..	124,000	2,780,500







RIFLE RANGE--600 YARD FIRING POINT, SHOWING NEW CONCRETE BARRICADE

Amounts brought forward ..... \$124,000      \$2,780,500

Chapel Street, wood, 2 rooms .....	4,000	
Cottage Street, wood, two rooms.....	4,500	
Coburn Primary, Charles Street, wood, 7 rooms and hall.....	31,000	
Charles Street, 4 rooms, wood.....	20,000	
Cabot Street, brick, 4 rooms.....	23,500	
Cheever Street, wood, 4 rooms.....	12,000	
Dover Street, wood, 4 rooms.....	13,500	
Favor Street, brick, 4 rooms.....	28,000	
Fayette Street, wood, 2 rooms, (unused)....	3,500	
Grand Street, wood, 2 rooms.....	5,000	
Howard Street, brick, 2 rooms.....	5,000	
High Street, wood, 3 rooms.....	9,000	
Kirk Street, brick, 2 rooms .....	18,000	
Lyon Street, brick, 4 rooms.....	20,000	
Lyon Street Annex, wood 1 room.....	5,400	
Lexington Avenue, wood 2 rooms.....	10,000	
Lakeview Avenue, wood, 4 rooms .....	8,500	
London Street, wood, 2 rooms.....	3,000	
London Street Annex, wood, 2 rooms .....	5,000	
Mammoth Road Kindergarten, wood, 1 room	4,000	
Morrill, brick, 4 rooms.....	19,000	
Middlesex Village, wood, 4 rooms.....	16,000	
Moody Street, wood, 6 rooms.....	20,000	
Oakland, wood, 4 rooms.....	12,000	
Old Middlesex Village, wood, (unused)....	2,000	
Plain Street, wood, 6 rooms.....	21,000	
Powell Street, wood, 2 rooms .....	8,000	
Pond Street, wood, 2 rooms .....	6,000	
Pine Street, wood, 4 rooms.....	23,000	
School Street, wood, 2 rooms, (unused)....	7,500	
Tenth Street, wood, 4 rooms.....	9,000	
Worthen Street, brick, 5 rooms.....	25,000	
Weed Street, wood, 4 rooms.....	10,500	
West Sixth Street, wood, 4 rooms.....	7,000	542,900
Total ... ..		\$ 3,323, 400

## SUMMARY OF BUILDING DEPARTMENT PROPERTY

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Buildings—work shops and storage sheds.....	\$ 10,500 00
Machinery.....	1,269 00
Tools and unclassified stock .....	742 18
Stable property.....	3,183 75
Elections .....	4,156 35
Lumber.....	523 81
Coffin property .....	245 42
Hardware . .....	139 37
Paint department.....	1,175 43
Mason department.....	63 85
Pipers department.....	314 61
City Hall office property .....	997 88
Total .....	<hr/> \$ 23,311 65

## Building Inspection

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While the year's business has fallen off a little over \$200,000 from that of the previous year, we cannot say that Lowell is not growing.

It is a well known fact that we are dependent in a great measure upon our large manufacturing companies for the greater part of our building activity. Their buildings are large and costly and when little in the line of new building is being done by these companies, the value of building operations must of necessity show a falling off. So long as we maintain a fair average each year we shall have little to complain of, and I feel that 1912 from a building standpoint compares favorably with any year in the past decade.

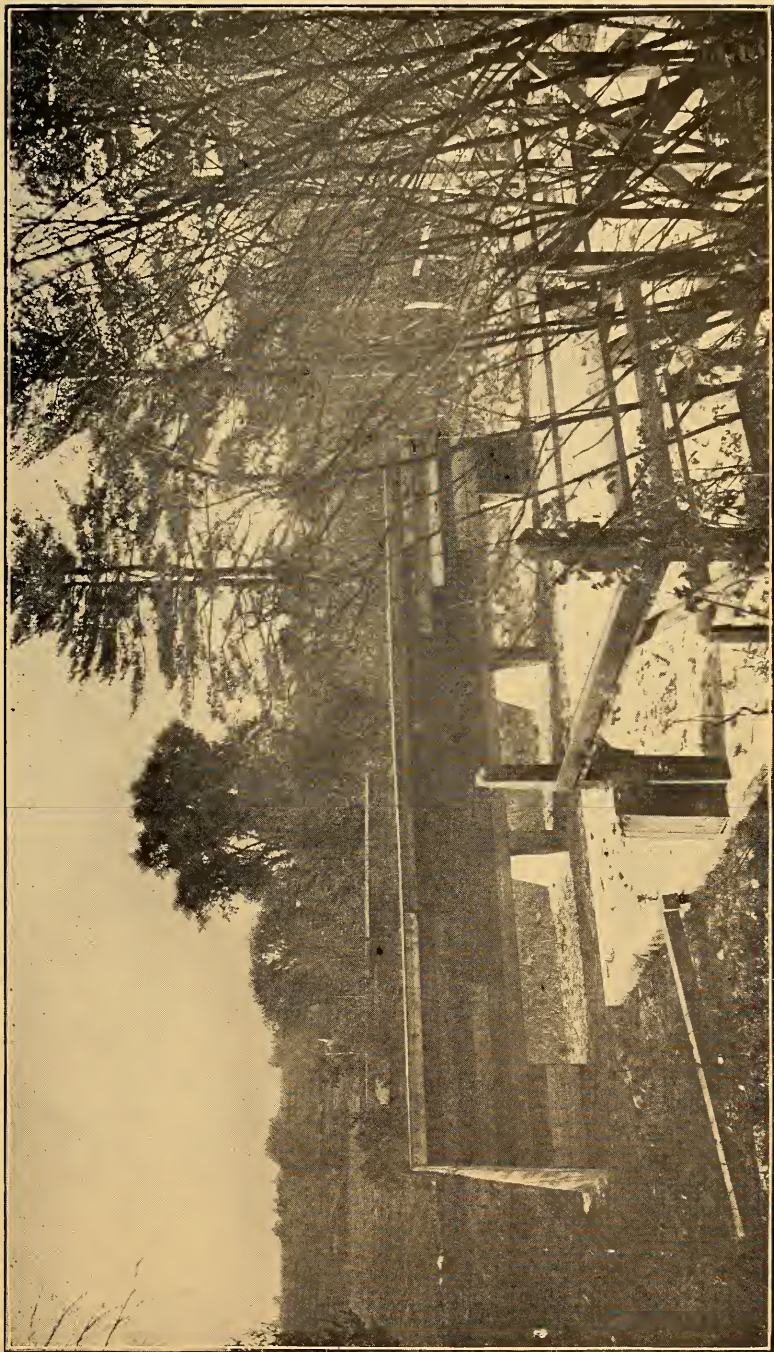
The outlook for 1913 is bright and bids fair to be a prosperous year for the building trades and a continuance of the bigger, better and busier feeling which will some day make Lowell one of the most prosperous cities, if not the largest city of the Commonwealth.

Much has been said of the growth of other Massachusetts cities, but the average resident of Lowell seems to forget that a good word for his own home city would soon act as a boon, which in time would aid in the prosperity of the city. I feel that we are forging ahead, perhaps our progress is not so great as that of Worcester or Springfield but nevertheless we are not far behind the leaders and with a little effort we may pass them. With our Board of Trade right on the job and a good word regarding our home city by the citizens as a whole, nothing can keep our city from growing.

TABLE OF BUILDING OPERATIONS

MONTHS	NEW BUILDINGS			ALTERATIONS AND ADDITIONS		SUMMARY	
	Wooden Buildings	Brick and Fireproof	Estimated C. st	Permits	Estimated Cost	Total Permits Issued	Total Estimated Cost
January.....	16	2	\$ 92,700	8	\$ 3,300	26	\$ 96,000
February.....	7	..	13,800	16	8,480	23	22,280
March.....	8	1	130,625	18	7,505	27	138,130
April....	39	3	215,840	52	31,675	94	247,515
May.....	27	3	132,555	31	24,673	61	157,228
June .....	20	1	69,360	44	21,071	65	90,431
July.....	24	..	60,925	24	43,210	48	104,135
August .....	21	3	88,065	20	8,000	44	96,065
September.....	23	..	46,950	29	27,920	52	74,870
October .....	25	1	98,100	24	13,390	50	111,490
November .....	21	2	29,420	20	9,835	43	39,255
December .....	14	2	85,400	23	28,850	39	114,250
Totals.....	245	18	\$1,063,740	309	\$227,909	572	\$1,291,649





RIFLE RANGE—500 YARD FIRING POINT, SHOWING BARRICADE





## BUILDING OPERATIONS FOR NINE YEARS

YEAR	NEW BUILDINGS			ALTERATIONS		SUMMARY	
	Wood Frame	Brick Firep'f Stone	Estimated Cost	Permits	Estimated Cost	Total Per'its	Total Estimated Cost
1904	118	8	\$ 584,935	65	\$ 92,370	191	\$ 677,305
1905	151	14	796,560	86	81,530	251	878,090
1906	164	12	724,124	177	177,621	353	901,745
1907	188	13	1,005,748	240	219,569	441	1,225,317
1908	205	13	797,670	279	221,411	497	1,019,081
1909	222	17	1,047,844	267	281,009	506	1,328,853
1910	246	19	1,471,496	297	306,158	562	1,777,654
1911	253	29	1,270,328	282	22,941	564	1,500,269
1912	245	18	1,063,740	389	227,909	572	1,291,649
Totals	1,792	143	\$ 8,762,445	2,002	\$1,837,518	3,937	\$10,599,963

## DWELLING PERMITS

Table showing the number of permits issued during each of the past six years for buildings used in whole or in part as dwellings.

KIND OF BUILDING	1907	1908	1909	1910	1911	1912	Total
One family dwellings . . . . .	77	49	71	73	95	103	468
Two family dwellings. . . . .	29	61	48	64	55	49	306
Three family dwellings . . . . .	13	15	9	12	12	8	69
Four family dwellings . . . . .	4	3	5	5	3	2	22
Five or more family dwellings . . . . .	8	13	16	9	11	6	63
Totals . . . . .	131	141	149	163	176	168	928

## SPECIAL PERMITS

During the year 278 special permits were issued providing for the erection of signs and awnings. These permits provided for the erection of 9 temporary cloth banners over the street, 80 flat signs attached to the walls of buildings, 172 projecting signs and 5 roof signs making a total of 266.

Of this number 29 were electrically illuminated signs. There were also 152 awnings erected, nearly all of which were of the hinge class.

## NEW BUILDINGS

**Permits issued, showing the number issued each month, and  
total for the year.**

KIND OF BUILDING	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
One family dwelling . . . .	11	4	3	14	9	8	10	9	7	13	8	7	103
Two family dwelling . . . .	2	3	..	8	9	5	4	1	7	1	2	7	49
Three family dwelling . . . .	1	..	..	1	..	..	4	..	1	1	..	..	8
Four family dwelling . . . .	..	..	..	1	1	..	..	..	..	..	..	..	2
Five family dwelling . . . .	..	..	..	..	..	1	..	..	..	..	..	..	1
Six family dwelling . . . .	1	..	..	..	1	1	..	..	1	1	..	..	5
Orphanage . . . . .	1	..	..	1	..	..	..	..	..	..	..	..	2
Store Building . . . . .	1	..	..	..	..	1	1	..	..	..	..	..	3
Henhouse . . . . .	..	..	1	2	..	..	..	2	..	1	..	..	6
Barns, stables . . . . .	1	..	1	2	..	1	1	1	1	1	1	1	11
Business building . . . . .	..	..	1	..	..	..	..	1	..	..	..	..	2
Garage. . . . .	..	..	2	6	4	2	1	8	4	4	2	..	33
Storage shed . . . . .	..	..	1	3	3	1	2	..	1	1	6	..	18
Manufacturing . . . . .	..	..	..	1	..	1	..	..	..	1	..	..	3
Dance Hall . . . . .	..	..	..	1	..	..	..	..	..	..	..	..	1
Foundation . . . . .	..	..	..	1	1	..	..	..	..	..	..	..	2
School . . . . .	..	..	..	..	1	..	..	..	..	..	..	..	1
Workshop . . . . .	..	..	..	..	1	..	1	..	1	1	..	..	4
Church . . . . .	..	..	..	..	..	..	..	1	..	..	..	..	1
Storehouse . . . . .	..	..	..	1	..	..	..	1	..	..	1	..	3
Hothouse . . . . .	..	..	..	..	..	..	..	..	..	1	1	..	2
Office, temporary . . . . .	..	..	..	..	..	..	..	..	..	..	1	..	1
Power House . . . . .	..	..	..	..	..	..	..	..	1	..	1	..	1
Comfort Station . . . . .	..	..	..	..	..	..	..	..	..	..	..	1	1
	18	7	9	42	30	21	24	24	23	26	23	16	263

## Gas Piping Inspection

The following is a brief summary of the work done by the Inspector of Gas Piping:

### BUILDINGS INSPECTED

New Buildings		Old Buildings	
1 family dwelling.....	103	1 family dwellings .....	151
2 family dwellings .....	55	2 family dwellings .....	45
3 family dwellings .....	9	3 family dwellings .....	6
4 family dwellings .....	2	4 family dwellings .....	15
5 family dwellings .....	1	5 family dwellings .....	4
6 family dwellings .....	5	6 family dwellings .....	10
1 family dwelling with store	1	8 family dwellings .....	2
2 family dwelling with store	1	9 family dwellings .....	5
4 family dwelling with store	1	12 family dwellings .....	1
5 family dwelling with store	1	19 family dwellings .....	1
6 family dwelling with store	1	1 family dwelling with store	1
Store and apartment building	1	Stores .....	15
Business Blocks .....	3	Manufactories .....	4
Club House .....	1	Laundries .....	2
Office .....	1	Apartment houses .....	2
Grain Warehouse .....	1	Lodging houses .....	7
Stores .....	6	Pool and billiard rooms .....	1
Stables .....	1	Coffee house .....	1
Stores and office buildings..	3	Bakeries .....	2
Gymnasium .....	1	Paint shop .....	1
Amusement house .....	1	Wood house .....	1
Schools .....	1	Office .....	1
Restaurant .....	1	Garages .....	6
		Theatres .....	2
		Business block .....	1
		Dance hall .....	1
		Tailor shops .....	2
		Alterations, extensions, and fuel lines .....	692
Total .....	201	Total .....	982

### VISITS OF INSPECTION

To new buildings .....	376
To old buildings .....	1183
On unfinished work .....	20
Total .....	1579
Job visited and work unfinished .....	10
Jobs not approved .....	17
Complaints investigated .....	32
Changes recommended .....	44

## Condemned Buildings.

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The following places were condemned during the year and the owners so notified immediately proceeded to remove the buildings in accordance with conditions of the notices served on them.

The plans were as follows:

Two story brick and wood building, planned to be used for store and rooms, at 7 and 9 Hanover Street, owner Athanasios Stavropoulos.

Three story wood frame brick veneered building, very old, used as tenement house, at 1 to 7 Chapel Street and 35 to 39 Charles Street, owner Margaret Wheelock

Three story wood frame building, used as market and furniture salesroom and warehouse, located at 16 to 20 Merrimack Street, owner J. L. Chalifoux Estate.

Two story wood frame building, used as dwelling, located at 37 Davidson Street, owner Heirs of Louis T. Montferrand.

One story outhouses and sheds, wood frame, located on Amory Street, near Bridge Street, owner Fred R. Brookings.

One story sheds, wood frame, used as wood yard buildings, located at 93 Paige Street, owner Thomas F. Morris.

One story sheds, wood frame, used as wood yard buildings, located at 600 Merrimack Street, owner Margaret Wheelock.

One story sheds, wood frame, used for storage at one time, located in rear of 454 Gorham Street, owner James Daly Estate.

One and a half story frame dwelling, located at 25 Keene Street, owner Melvin Rogers.

One story frame buildings, rear of 314 and 316 Market Street, owner G. C. and W. P. Dempsey, Trustees.

Two story frame building, located on Cushing Street, and owned by John P. Squires Co. of Boston, Mass.

## Conclusion.

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Before closing my report I wish to mention a few of the larger buildings for which permits were issued during the year.

They are as follows:

The French Orphanage on Pawtucket Street, a three story brick building; Sun Building on Merrimack Street, a ten story fireproof building; five story mill of the Appleton Company on Jackson Street; the three story fireproof building for St. Peter's Orphanage on Stevens Street; the Page Building on Merrimack Street, belonging to the J. L. Chalifoux Estate, four stories, fireproof construction; Dana's brick garage on East Merrimack Street; Parochial School on Gorham Street, belonging to St. Peter's Parish, brick and wood, three stories.

Lowell Electric Light Corporation, brick garage on Perry Street; Church of the First Spiritualist Society on Middlesex Street, built of concrete blocks; four story brick warehouse for J. F. Saunders, on Summer Street; the four story brick factory, power house, office and cement house of the Patterson Rubber Co., on Middlesex Street.

The brick stable for the Health Department, on Broadway; the new Comfort Station on Palge Street, both buildings belonging to the City.



List of Jurors for the  

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City of Lowell for the  

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## LIST OF JURORS

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### A

Abbott, Francis A. 896 Middlesex st, carpenter  
Abbott, James M. 24 Fairmount st, broker  
Abbott, John W. 12 Fremont st, tinsmith  
Abell, Orrin W. 31 Princeton st, printer  
Achin, Victor 388 Fletcher st, dealer  
Adams, Asbury F. 36 Third st, meat market  
Adams, George F. 105 Gates st, overseer  
Adams, John M. 511 School st, painter  
Adams, Walter S. 49 Sixth st, machinist  
Adie, John P. 26 So. Whipple st, printer  
Aldrich, William K. 4 Grove st, manufacturer  
Alexander, Jesse 197 White st, clerk  
Alexander, J. Walter 774 Moody st, clerk  
Alexandre, J. Henry 53 Dracut st, laborer  
Allard, Albert 193 Mammoth rd, lunch cart  
Allard, George Z. 200 Cumberland rd, operative  
Allard, Henry 130 Gershom ave, clerk  
Allard, Joseph J. 114 Ennell st, storekeeper  
Allard, Simon 80 Queen st, shoe cutter  
Allen, Charles O. 79 Warwick st, receiving teller  
Allen, Walter M. N. 39 Elliot st, machinist  
Alley, Andrew J. 29 So. Walker st, patternmaker  
Alshaw, Thomas H. 793 Moody st, operative  
Anderson, August 23 Lundberg st, operative  
Andrews, John A. rear 11 So. Whipple st, leatherworker  
Angluin, David H. 124 Moore st, steamfitter  
Appleton, Francis E. 49 Warwick st, paymaster  
Archambault, Amedee 742 Merrimack st, undertaker  
Armitstead, Robert R. 228 Varnum ave, dealer  
Arnold, William A. 401 Beacon st, bookkeeper  
Ashton, John T. 60 Orleans st, second hand

Ashworth, George L. 110 Westford st, clerk  
Ashworth, James 137 Stackpole st, gentleman  
Aspin, James T. 4 Agawam st, weaver  
Atherton, Charles S. 12 Cheney pl, clerk  
Atwood, William P. 17 Nineteenth st, chemist  
Audette, Joseph 191 Salem st, operative  
Austin, Fred A. 86 Branch st, shoemaker  
Ayer, Lorenzo 557 Varnum ave, gardener  
Ayer, William A. 27 Varnum ave, plumber  
Ayotte, Edward 83 Salem st, operative

**B**

Bachelder, Harry B. 158 Mt. Vernon st, manufacturer  
Bagshaw, Charles H. Wedge cor. Lura st, manufacturer  
Bailey, Frank E. 33 Canton st, wholesale beef  
Bancroft, Frank M. 16 Brookside st, motorman  
Barker Edgar H. 9 Mt. Hope st, instructor  
Barnard, Virgil G. 68 Harvard st, treasurer  
Barnes, Henry W. 30 Huntington st, banker  
Baron, Charles C. 88 Eleventh st, public accountant  
Barrett, Andrew E. 77 Mt. Vernon st, commissioner  
Barrett, Edward J. 94 School st, grocer  
Barris, William J. 63 Jenness st, mill overseer  
Barry, Charles E. 16 Spalding st, operative  
Barry, Eusebe 124 Fourth ave, conductor  
Barry, Henry 47 Exeter st, operative  
Barry, Patrick H. 294 Wentworth ave, liquor dealer  
Bartlett, Arthur 370 Beacon st, civil engineer  
Bartlett, Joseph O. 37 Hastings st, operative  
Bartlett, William T. S. 167 Varnum ave, dealer  
Bassett, Cyrus R. 90 Andrews st, farmer  
Bachelder, Mark O. 650 Stevens st, overseer  
Bateman, John F. 39 Robbins st, surveyor  
Beals, Horace P. 84 Marlborough st, lumber business  
Bean, Daniel F. 15 Eighth ave, shoe manufacturer  
Bean, Frank S. 26 Eleventh st, produce  
Bean, Howard C. 15 Eighth ave, director  
Bean, Ralph M. 15 Eighth ave, secretary  
Beane, Thomas J. 104 Pleasant st, life insurance  
Beaulieu, John H. 202 Hildreth st, storekeeper  
Beaumier, Joseph 11 Second st, clerk  
Beauregard, Oliver J. 22 Wiggin st, grocer

Beck, Edmund 375 Chelmsford st, mason  
Belanger, Charles A. 1 Henry ave, printer  
Bell, Frank A. 17 Wachusett st, machinist  
Bellefontaine, Miller 130 Riverside st, furiture dealer  
Bennett, George A. 51 Marshall st, foreman  
Bennett, George H. 210 High st, blacksmith  
Berard, Adelard 577 Middlesex st, expressman  
Bergeron, Albert 510 Moody st, salesman  
Bernard, Ernest A. 7-449 Moody st, barber  
Bibeault, Alfred 110 Ford st, carpenter  
Biggs, John 585 School st, carpenter  
Billingsley, Fred 320 Wentworth ave, liquor dealer  
Bishop, Herbert L. 28 May st. paymaster  
Bissell William E. K. 47 Methuen st, clerk  
Bissonnette, John 47 Mt. Washington st, painter  
Bissonnette, Joseph M. 116 Aiken ave, meat cutter  
Bissonnette, Zephyrim J. 60 Third ave, telegrapher  
Bixby, Albert J. 25 Rutland st, machinist  
Bixby, Newton 32 Beech st, slasher  
Blaisdell, Frank H. 239 East Merrimack st, teamster  
Blazon, Donat 131 Gershom ave, printer  
Blessington, John B. 53 Second ave, foreman  
Blodgett, Emery F. 585 Chelmsford st, bookkeeper  
Blodgett, William H. 5 Lamb st, carpenter  
Blood, Cyrus F. 222 High st, clerk  
Booth, Walter 113 School st, fruit dealer  
Boisvert, Jacques 363 Hildreth st, builder  
Boucher, Thomas E. 65 Hampshire st, clerk  
Boudreau, Henri 7-746 Lakeview ave, clothing store  
Boudreau, John B. 24 Crawford st, grocer  
Boulais, Arthur N. 8 Dracut st, grocer's clerk  
Bourdon, Michael 94 Ford st, carpenter  
Bourque, Philip R. 67 Gage st, carpenter  
Bourret, Charles C. 32 Campaw st, master plumber  
Bowers, Duncan V. 445 Lawrence st, grocery store  
Box, John W. 7 Lyon st, belt maker  
Boyle, James H. 110 Congress st, conductor  
Boyle, John L. rear 110 Congress st, machinist  
Boyle, Thomas H. 715 Bridge st, liquor dealer  
Bradley, Albert 1023 Central st, pool room  
Bradt, David H. 125 Mt. Vernon st, prop. bakery  
Brady, Peter J. 247 Gorham st, merchant

Brady, Thomas 198 Mammoth rd, manager  
Brassill, Dennis 58 Walnut st, operative  
Breen, John P. 9 Lyon st, loomfixer  
Brennan, Owen E. 20 Crowley st, hardware dealer  
Brennan, Frank M. 150 Agawam st, brakeman  
Brierly, Eugene L. 126 Bartlett st, painter  
Broughton, John L. 5-320 Thorndike st, laborer  
Brigham, Charles R. 70 Queen st. clerk  
Brissette, Rupert N. 244 Hale st, clerk  
Brogan, Joseph 80 Mt. Washington st, machinist  
Brooks, James S. 261 Mammoth rd, grocer  
Brosnahan, Patrick H. 796 Lawrence st, liquor dealer  
Brothers, George W. 216 Foster st, treasurer Gas Co.  
Brousseau, Pierre A. 43 Essex st, clerk  
Brown, Benjamin G. 182 Westford st, truckman  
Brown, Milon D. 295 Central st, cigar dealer  
Brown, Patrick W. 8 Marsh st, operative  
Bruce, Clinton L. 41 Bowers st, mfg. plasters and medicine  
Brun, Arthur 15 Circuit ave. operative  
Brunelle, Oliva 33 Gershom ave, operative  
Buckley, George 190 High st, gas fitter  
Buckley, John 305 Summer st, bookkeeper  
Buckley, John F. 12 Orford st, dealer  
Buckley, John T. 26 Ash st, painter  
Buckley, Timothy 453 Riverside st, operative  
Buckland, Elmer E. 184 Pine st, printer  
Burbank, Edward P. 43 Second ave, operative  
Burbank, John E. 27 Central st, merchant  
Burbank, Percival P. 14 Eighth ave, dealer  
Burgess, Edwin 120 Billerica st, plumber  
Burke, Edward N. 216 Nesmith st, retired  
Burke, William H. 14 Warnock st, operative  
Burke, William P. 30 Abbott st, watchman  
Burkinshaw, Joseph 18 Bellevue st, druggist  
Burnham, Albert W. 142 Mt. Grove st, dentist  
Burns, George E. 61 Eighteenth st, clerk  
Burns, James E. 23 State st, laborer  
Burns, Edward 84 Pleasant st, wool sorter  
Burns, James F. Jr. 427 Lakeview ave, machinist  
Burns, John J. 607 Westford st, dry goods merchant  
Burrill, John F. 612 Beacon st, clerk  
Burtt, Walter N. 385 Walker st, clerk  
Butman, Josiah M. 11 Coral st, retired



Byam, Arnold A. 12 Albert st, real estate  
Byam, Otis 79 Canton st, milk dealer  
Byrne, Patrick J. 571 East Merrimack st, coachman

## C

Caddell, Andrew M. 115 Fowler rd, weaver  
Caddell, James 115 Fowler rd, plumber  
Cadorette, Albert 619 Lakeview ave, carpenter  
Cadorette, Joseph 118 Ennell st, mason  
Cady, George L. Jr. 150 Mt. Vernon st, box maker  
Caisse, Wilfred Jr. 773 Merrimack st, druggist  
Callahan, George T. 229 Christian st, advertiser  
Callahan, Philip H. 82 Beacon st, painter  
Camire, Evariste A. 737 Moody st, storekeeper  
Campbell, Abel R. 23 Harris ave, real estate  
Campbell, Frank J. 709 Westford st, druggist  
Campbell, George 10 West Fifth st, grocery clerk  
Campbell, George M. 48 East Merrimack st, dealer  
Cannon, Michael F. 155 Shaw st, printer  
Cantin, Eugene H. 44 Mt. Vernon st, real estate  
Carmichael, James H. 59 Fort Hill ave, overseer  
Caron, Albert J. 4 Robert st, clerk  
Caron, Joseph 404 Fletcher st, operative  
Carpenter, Henry 27 Ellis ct, shipping clerk  
Carpenter, W. Irving 32 Fay st, fish dealer  
Carpentier, Henry 30 West Meadow rd, shoecutter  
Carty, Terrence 27 Court st, watchman  
Carr, Walter W. 9 Rhodora st, asst. supt. M. P. W.  
Carrier, Joseph 2 Dracut st, clerk  
Carrigg, John J. 35 Third st, stage manager  
Carroll, Daniel F. 216 Thorndike st, master plumber  
Carroll, Vetrell 96 Crawford st, operator  
Casey, George W. 45 Willow st, real estate  
Casey, James B. 815 Chelmsford st, manufacturer  
Casey, Thomas P. 87 Moore st, foreman  
Cassidy, James W. 4 Fifth ave, retired  
Catherwood, Robert 58 Epping st, milkman  
Cawley, Edward 85 Rogers st, coal dealer  
Cawley, William F. 85 Rogers st, clerk  
Chambers, John H. 196 Gorham st, teamster  
Chapman, Herbert L. 364 East Merrimack st, printer  
Chappell, Raymond 18 Ash st, clerk



Charlton, Richard 538 Westford st, clerk  
Charron, Edmond J. 28 Howard st, machinist  
Charron, Sylva 134 West st, chef  
Chase, Frederick A. 19 Nesmith st, librarian  
Chase, Howard E. 237 Foster st, machinist  
Chase, Walter I. 271 Gibson st, clerk  
Chenevert, Marcel D. rear 547 Lakeview ave, painter  
Cheney, James E. 8 Bagley ave, pattern maker  
Cheney, George H. 55 Chase ave, watchman  
Chevalier, Edward 33 Fifth ave, grocer  
Choate, Albert H. 40 Hawthorne st, drug clerk  
Chouinard, Zenon 87 Pawtucket st, dry goods  
Choquette, Jeremie A. N. 89 Butterfield st, clerk  
Choquette, Joseph 772 Moody st, clerk  
Chretien, Joseph A. N. 159 Ludlam st, clerk  
Christman, Eustache 154 Woburn st, grocer  
Cinqmars, Euclide 82 Gershom ave, operative  
Claffy, John W. 28 Lawrence st, second hand  
Clancy, Arthur F. 85 Gershom ave, conductor  
Clancy, John 198 Riverside st, dealer  
Clark, Marion S. 203 Gibson st, clerk  
Clark, T. Frank 103 Pleasant st. clerk  
Clay, Harry E. 31 Race st, operator  
Clay, Henry 31 Race st, box maker  
Cleary, Daniel 47 Swift st, master plasterer  
Clement, Alfred 17 West Fifth ave, operative  
Clement, Charles M. 295 Foster st, carpenter  
Cleworth, Walter W. 85 Royal st, teller  
Clifford, Charles T. 99 Westford st, dentist  
Clifford, Robert H. 956 Bridge st, census clerk  
Clough, Henry H. 280 Varnum ave, none  
Cluin, John J. 130 Fort Hill ave, jeweler and optician  
Coburn, Clarence G. 735 Varnum ave, retired  
Coburn, Harry W. 214 Third st, dentist  
Coburn, Joseph V. B. 215 Mammoth rd, grocer  
Coburn, Laurens W. 48 Varney st, clerk  
Coburn, Walter S. 28 Mt. Washington st, manufacturer  
Coburn, Walter 14 Wannalancit st, dealer  
Coffey, Timothy J. 21 Marginal st, grocer  
Cogger, John H. 80 White st, printer  
Cogger, William 82 Park View ave, advertising  
Coggeshall, Fred H. 38 Nichols st, clerk

Cognac, Emery 729 Moody st, dealer  
Colburn, John H. 35 West Ninth st, retired  
Cole, John W. 14 Fairfield st, restaurant  
Coleman, Joseph H. 881 Bridge st, painter  
Collins, Cornelius E. 394 High st, real estate and insurance  
Collins, J. Henry 27 Princeton st, electric supplies  
Commerford, Edward J. 267 Pawtucket st, retired  
Conant, Arthur J. 29 Victoria st, grocer  
Conant, Charles H. Jr. 19 Nesmith st, bank clerk  
Conant, George W. 27 Burt st, machinist  
Conant, Herbert J. 16 Grove st, clerk, B. & M. R. R.  
Condon, John H. 96 Midland st, janitor  
Conley, Leander F. 69 Tolman ave, overseer  
Conley, Martin F. 330 Concord st, barber  
Connell, Philip H. 33 Lamb st, teamster  
Connolly, John F. 108 Agawam st, woolsorter  
Connor, Edward 88 Seventeenth st, second hand  
Connor, John P. 806 Moody st, dealer  
Conroy, Robert F. 153 Appleton st, manager  
Conway, Anthony A. 11 Marlborough st, dealer  
Cooke, Charles E. 182 Smith st, elevator operator  
Cooney, Dennis J. 649 Westford st, liquor dealer  
Copeland, Charles S. 73 South Loring st, real estate  
Corbett, John H. 14 Burns st, provision dealer  
Corliss, Ammi L. 9 Methuen st, sexton  
Corwin, Harry J. 25 Huntington st, advertising manager  
Cossette, Jeffrey 40 Sparks st, printer  
Cossette, Majorique J. 294 Riverside st, clerk  
Cossette, P. Napoleon 9 Common ave, real estate  
Cote, Lewis 101 Grand st, clerk  
Cote, Raoul 161 East Meadow rd, operative  
Cote, Raoul, 161 East Meadow rd, machinist  
Cottrell, Thomas S. 44 Crowley st, weaver  
Cottrell, William H. 112 D st, printer  
Coughlin, Jeremiah 359 Concord st, gardener  
Cover, Frank G. 30 West Bowers st, dealer  
Cover, John B. 16 Lombard st, dealer  
Cox, Terrence J. 239 Stackpole st, barber  
Craig, Joseph 73 Congress st, foreman of switch tower  
Croft, William J. 380 Woburn st, dealer  
Croft, William J. Jr. 380 Woburn st, clerk  
Cronin, Cornelius F. 1002 Moody st, clerk

Crosby, Burton H. 111 Moore st, mason  
Crosby, Frederick H. 17 Otis st, plasterer  
Crowe, Joseph L. 9 Lagrange ct, machinist  
Crowley, John A. 3 Fulton ave, student  
Crowley, Patrick H. 107 Blossom st, laborer  
Crowley, Robert E. 115 Fort Hill ave, real estate  
Crowley, Robert E. Jr. 115 Fort Hill ave, real estate  
Crowley, Thomas S. 31 West Ninth st, bartender  
Crowley, William L. 453 Riverside st, constable  
Cryan, Martin 90 White st, dealer  
Cryan, Thomas 8 Batchelder pl, conductor  
Crysler, H. Stanley 258 Gibson st, manager  
Cuff, John H. 18 Agawam st, moulder  
Cuff, Thomas F. 18 Agawam st, dentist  
Cull, John H. 84 Chapel st, printer  
Cummings, George W. 124 Dunbar ave, real estate  
Cummings, Marshall F. 20 Chelmsford st, clerk  
Cunningham, Clarence 39 Durant st, steward  
Cunningham, Fred W. 27 Fay st, shuttlemaker  
Curran, John 5 Ardell st, inspector  
Curry, James 105 Tremont st, steam fitter  
Curtin, Richard J. 514 East Merrimack st, barber  
Cushing, Edward T. 20 Chelmsford st, hotel  
Cushing, Joseph L. 32 Mt. Washington st, manufacturer  
Custv, Patrick J. 96 Mt. Washington st, merchant  
Cutler, John S. 840 Varnum ave, barber  
Cutting, Lawrence F. 78 Methuen st, clerk

**D**

Daigle, Henri 17 Endicott st, operative  
Daignault, Oscar J. 201 Middlesex st, barber  
Daily, Thomas J. 16 Watson st, operative  
Delaney, John J. 204 South st, tailor  
Daley, Peter 203 Broadway, laborer  
Dallaire, Pierre V. 92 West Sixth st, barber  
Dalphon, Alphonse 235 Ludlam st, operative  
Dalton, John J. 55 Nesmith st, clerk  
Daly, Frank W. S. 102 Jenness st, clerk  
Daly, Jeremiah A. 211 Fletcher st, insurance agent  
Daly, John J. 19 North st, operative  
Daly, John W. 76 Andrews st, clerk  
Daly, William F. 20 Walden st, insurance agent

Dana, Harry C. 365 Worthen st, machinist  
Danahy, John J. 22 Crowley st, tinsmith  
Dane, George F. 53 Oakland st, foreman B. & M. R. R.  
Davenport, William E. 148 High st, driver  
Davey, Peter 83 Bartlett st, undertaker  
David, Albert W. 234 Gibson st, clerk  
David, Olier 225 Ludlam st, insurance agent  
Davidson, William T. 67 Varney st, granite cutter  
Davis, Prentice T. 35 Boynton st, overseer  
Day, James E. 4 Runels pl, agent  
D'Avignon, Charles J. 763 Merrimack st, stonecutter  
Dean, Eugene F. 203 Salem st, clerk  
Dean, Sam 65 Queen st, overseer  
Dearborn, George W. 55 Marlborough st, superintendent  
Dearborn, Lafayette A. 12 Totman st, engineer  
Delaronde, Charles A. 128 Lilley ave, clerk  
Delisle, Arthur 66 Tucker st, clerk  
Delisle, Xavier A. 784 Merrimack st, clerk  
Deloria, Alexander E. 458 Fletcher st, operative  
Delorme, Joseph 368 Hildreth st, hatter  
Denault, Pierre L. 41 Jewett st, real estate  
Dennis, Edward P. 25 Georgia ave, retired  
Derby, Lucius A. 148 First st, electrician  
Dery, Lewis 3 Dana st, mason  
Desaulniers, Olivier L. 14 West Bowers st, clerk  
Descheneaux, Radick 767 Moody st, carpenter  
Desilets, Horace 91 Willie st, clerk  
Deslandes, Ambrose 290 Westford st, barber  
Desmarais, Edelmard St. 941 Lakeview ave, plumber  
Desmond, Cornelius 195 Stackpole st, blacksmith  
Desmond, Daniel A. 19 Wright st, dealer  
Desrosiers, Joseph A. 210 Hildreth st, clothing dealer  
Desrosiers, Lewis J. 142 Ennell st, clerk  
Desrosiers, Oliva 244 Cumberland rd, dealer  
Devlin, James P. 43 Willow st, printer  
Dextra, Joseph 518 Merrimack st, barber  
Dickerman, William O. 64 Bellevue st, clerk  
Dickey, Thomas L. 66 Porter Terrace, insurance  
Dickson, David 142 Smith st, tea merchant  
Dickson, William 39 Roper st, insurance  
Dilworth, Dennis 95 Agawam st, overseer  
Dobson, Frank W. 148 Andover st, clerk

Doherty, Henry P. 78 Bridge st, master painter  
Donnelly, John F. 7 Newhall st, grocer  
Donnelly, John P. 36 Floyd st, blacksmith  
Donohoe, Andrew 17 South Highland st, liquor dealer  
Donohoe, Charles T. 41 Chapel st, clerk  
Donohue, Michael J. 3 Brooks st, salesman  
Donovan, Daniel 1235 Middlesex st, provisions  
Donovan, Francis D. 1235 Middlesex st, clerk  
Donovan, James C. 176 Branch st, dealer  
Donovan, William H. 26 Madison st, dealer  
Doole, George Lee 14 Staveley st, operative  
Doran, Daniel 173 School st, assistant superintendent  
Dow, Frank B. 374 High st, hardware dealer  
Dow, George L. 46 West Fifth st, drug clerk  
Dow, Oscar C. 374 High st, clerk  
Downs, Earl C. 21 Sagamore st, electrician  
Doyle, George J. 15 Whipple st, barber  
Doyle, James T. 15 Livermore st, clerk  
Doyle, Stephen H. 23 Phillips st, barber  
Dozois, George H. 187 White st, machinist  
Dozois, Hector A. 40 Fanning st, machinist  
Dozois, Victor E. 187 White st, clerk  
Drewett, Sidney 139 Hildreth st, sexton  
Drinan, George 17 Burlington ave, machinist  
Driscoll, Patrick H. 16 Edwards st, school janitor  
Driscoll, William A. 47 Grace st, claim agent  
Drury, Harry S. 44 Hanks st, plumber  
Dubuque, George H. 22 East Pine st, clerk  
Duckworth, Thomas 150 Fort Hill ave, superintendent  
Duff, John J. 19 Burns st, wine clerk  
Duffy, Michael A. 1-2 Dutton st, bottler  
Dufresne, Edward P. 14 Wiggin st, clerk  
Dumas, Allan M. 55 Huntington st, dealer  
Dumas, Charles 25 Dane st, painter  
Dumas, Ernest G. 55 Huntington st, manuf'g stationer  
Duncklee, Fred W. 28 Bowden st, foreman  
Dunfey, James T. 63 Sixth ave, auditor's clerk  
Dunham, James H. 235 Stackpole st, dealer  
Dupont, Ernest J. 443 Moody st, clerk  
Dursthoff, Charles C. 1500 Gorham st, overseer  
Duval, Alfred 77 Gershom ave, machinist  
Dwyer, John 12 Oak st, painter



## E

Eames, Melvin 32 West Sixth st, secondhand  
Eastman, Henry F. 327 Rogers st, mechanical engineer  
Eastman, Raymond W. 18 May st, carpenter  
Eaton, Charles W. 108 Myrtle st, banker and broker  
Ekengren, Carl 28 State st, wool sorter  
Ekengren, Per William 28 State st, electrician  
Elliott, Herford N. 25 Fairview st, real estate  
Elliott, Robert H. 319 Stevens st, real estate  
Emmott, Walter H. 4 Chester st, manager  
Enright, Cornelius F. 295 Thorndike st, master painter  
Enright, George W. 40 Robert st, clerk  
Erdis, Hugh W. 240 Liberty st, merchant  
Estabrook, Howard M. 22 Seventh ave, meat cutter  
Evans, George C. 239 Liberty st, manager  
Eveleth, Allan C. 201 Thorndike st, clerk

## F

Fairbanks, William M. 31 Hoyt ave, J. C. Ayer Co.  
Fairburn, George 384 High st, provision dealer  
Fall, George F. 694 Varnum ave, teamster  
Farley, Harry P. 36 Prescott st, bottler  
Farnham, Frederick W. 60 Marlborough st, civil engineer  
Farrell, Edward F. 12 Third ave, plumber  
Farrell, John M. 2 West View st, auctioneer  
Farrington, John C. 182 Perry st, clerk  
Farrington, Willis 234 Nesmith st, gentleman  
Favreault, William A. 190 Pawtucket st, clerk  
Fay, Edgar G. 833 Stevens st, plumber  
Fay, Frederick T. 371 East Merrimack st, druggist  
Fay, George D. 306 Tenth st, bank clerk  
Fay, Henry J. 70 Lawrence st, retired  
Fecteau, Alexis F. 740 Merrimack st, clerk  
Fife, James 46 Merrill st, machinist  
Filion, George H. 348 Hildreth st, jeweler  
Filion, J. Anaclet 348 Hildreth st, jeweler  
Finnerty, Patrick J. 113 Lawrence st, iron smelter  
Firth, Rylah 57 Midland st, paymaster  
Fitzgerald, Patrick 169 Broadway, bartender  
Flanagan, Edward M. 22 Westford st, checker  
Flather, Frederick A. 68 Mansur st, treasurer

Fleming, James H. 41 Rock st, laborer  
Fleming, Samuel 35 Methuen st, bootmaker  
Fletcher, Edwin L. 81 Holyrood ave, grocer  
Flood, James H. 118 Bartlett st, grocer  
Flood, Terrence E. 28 Mt. Grove st, carpet weaver  
Flynn, Simon 205 Cross st, water department  
Fogg, Charles C. 10 Robbins st, merchant  
Foisey, Joseph A. 327 Hildreth st, baker  
Forrest, Charles M. 30 Sanders ave, lumber dealer  
Fortin, Antoine 903 Moody st, clerk  
Foye, John J. 45 Coral st, hotel proprietor  
Fraser, Allan 13 McKinley ave, merchant  
Frawley, David F. 87 Boynton st, glazier  
Frayne, John 8 Prince st, barber  
Frechette, Wilfrid 425 Moody st, overseer  
French, Albert F. 213 Park View ave, manufacturer  
Frye, Austin A. 105 Eighteenth st, druggist  
Frye, George H. 36 Second st, constable  
Fuller, George B. 1524 Gorham st, lumber man

## G

Gagnon, Arthur J. 466 Merrimack st, dentist  
Gagnon, George 67 Mt. Hope st, clerk  
Gagnon, Joseph A. 67 Mt. Hope st, buyer  
Gagnon, Louis 172 Riverside st, clerk  
Gallagher, Charles A. 85 Gershom ave, conductor  
Gallagher, Charles J. 222 High st, druggist  
Gallagher, Edward 300 Wilder st, hotel  
Gallagher, James J. 168 Cumberland rd, cigar store  
Gallagher, Thomas J. 15 Jewett st, watchman  
Gallagher, William H. 180 Ennell st, clerk City Hall  
Gamache, Emile 1210 Gorham st, grocer  
Gargan, Frank 79 Bartlett st, operative  
Garland, Arthur W. 27 So. Loring st, railroad clerk  
Garmon, Joseph A. 76 Nineteenth st, foreman  
Garrahan, George W. 61 Walnut st, barber  
Garvey, Michael J. 203 Broadway, bartender  
Garvey, Thomas F. 72 Lilley ave, cigar maker  
Gaudette, George 66 Dalton st, baker  
Gaudette, Octave 44 So. Loring st, wholesale confectioner  
Gelinias, Victor 15-129 Aiken st, grocer  
Gendreau, Fabyan Circuit ave, tannery



Gendreau, George 42 Denton st, tannery  
Gendreau, John B. 71 Bolton st, tannery  
Genereux, Hildege 878 Moody st, clerk  
Genest, Arthur 111 Gershom ave, contractor  
Gerow, David 162 Chelmsford st, hay and grain  
Gerry, Edgar A. 12 Bellevue st, messenger  
Gibson, Thomas 27 Cady st, secondhand  
Gilbert, Arthur D. 173 Foster st, bookkeeper  
Gilbert, Franz S. 50 Laurel st, overseer  
Gill, Edmund J. 768 Merrimack st, state house Boston  
Gill, Homer J. 8 Crane ave, clerk  
Gillooley, Owen 27 Walnut st, machinist  
Gillon, Hugh F. 84 Bartlett st, newspaperman  
Gilman, Albert I. 20 East Pine st, foreman  
Gilman, George S. 1263 Middlesex st, machine business  
Gilmore, Elbert J. 145 Beacon st, superintendent  
Gilmore, William J. 52 Royal st, second hand  
Ginty, Philip 76 So. Highland st, master slater  
Giroux, Frederick 158 Riverside st, teamster  
Golden, Thomas A. 17 Riverside ave, carpenter  
Goodall, Samuel 417 Dutton st, watchman  
Gookin, James 300 Concord st, furniture business  
Gookin, John J. 15 Aberdeen st, manager  
Gordon, George W. 61 Loring st, laborer  
Gordon, John G. 61 Loring st, foreman,  
Gorman, James E. 412 Gorham st, shoe dealer  
Gormley, Joseph H. 11 Lyon st, insurance agent  
Gosselin, Phillippe 51 Mammoth rd, boiler maker  
Gouin, Lorenzo A. 229 Charles st, printer  
Goyette, Thomas J. 57 Fifth ave, painter  
Grady, John J. 576 School st, laborer  
Grandchamp, Napoleon C. 12 Arthur ave, clerk  
Grant, Alfred T. 99 Mt. Washington st, painter  
Gray, Harry 93 Dover st, provision dealer  
Gray, James H. 23 Ellsworth st, lather  
Gray, John J. 236 Plain st, real estate agent  
Gray, Michael J. 10 Kinsman st, clerk  
Green, James B. 35 Bartlett st, druggist  
Greene, Harvey B. 73 Marlborough st, florist  
Greenwood, Othello O. 180 Hale st, grocer  
Griffin, Warren T. 113 So. Walker st, merchant  
Grover, Charles F. 80 Sherman st, div. supt. tel. co.

Groves, Frank A. 53 Thirteenth st, bank teller  
Guild, Albert S. 26 Arlington st, banker and broker  
Guimond, Adelard 80 D st, brakeman  
Guimond, Albert F. 823 Moody st, knitter  
Guimond, Amedee 101 Aiken ave, knitter

## H

Haines, Olin M. 18 Upham st, machinist  
Hale, Milo W. Jr. 9 Glidden ave, clerk  
Haley, Michael 8 State st, mason  
Hall, Thalles P. 149 Stackpole st, retired  
Halloran, Daniel C. 546 East Merrimack st, gardener  
Halstead, Charles W. 47 Methuen st, elec. lt. station  
Hamel, Alfred 414 School st, baggage master  
Hamell, James 641 Market st, laborer  
Hamilton, Thomas H. 6 Brown's ct, plumber  
Hamlin, Charles E. 90 Fourth ave, electroplater  
Hanchett, Frank 89 Harvard st, dealer  
Hansbury, James W. 29 Hastings st, machinist  
Hanson, James S. 584 Westford st, horse dealer  
Harmon, Almon 21 Shedd st, clerk  
Harnois, Alfred 472 Moody st, agent  
Harrigan, William H. 38 So. Walker st, collector  
Harrington, George H. 258 Merrimack st, agent  
Harrington, J. Russell 243 Stackpole st, clerk  
Harrison, Harry 46 Forrest st, machinist  
Harrison, Fred 694 School st, overseer  
Hart, Daniel J. 52 Colonial ave, master baker  
Hartnet, John J. 105 Liberty st, operative  
Harvey, Joseph 843 Moody st, master plumber  
Haviland, John J. 932 Lakeview ave, weaver  
Hawes, William H. 59 Canton st, broker  
Hayes, Daniel 73 Fletcher st, motorman  
Hayes, Jeremiah J. 70 Walker st, foreman  
Hayes, William A. 387 Princeton st, conductor  
Haynes, Frank H. 430 Wilder st, manufacturer and banker  
Hearn, James 50 Corbett st, watchman  
Hearn, James 536 Fletcher st, reporter  
Hebert, Samuel P. 23 Adams st, grocer  
Hemman, Richard C. 245 Stevens st, cashier  
Hennessy, Joseph 46 Common st, machinist  
Hersey, Freeman S. 137 Forrest st, machinist

Hetu, Hermidas 12 Dane st, second hand  
Hibbard, Joseph 52 Central st, real estate  
Hickey, Cornelius L. 1012 Central st, electrical worker  
Hickey, Walter 643 Westford st, foreman  
Higgins, John J. 135 Andrews st, undertaker  
Higgins, Patrick 17 Walnut st, machinist  
Higgins, Wesley R. 82 Read st, painter  
Hill, James 37 Whipple st, motorman  
Hilliard, Asa B. 408 Middlesex st, foreman  
Hird, David 12 Blodgett st, wool sorter  
Hoar, Martin J. 31 London st, folder  
Hodgson, William H. 1195 Lawrence st, upholsterer  
Hogan, Daniel E. 30 Fort Hill ave, real estate and insurance  
Hoisington, Charles F. 68 Thirteenth st, stove dealer  
Holgate, Benjamin 50 B st, accountant  
Hollingsworth, Joseph K. 130 Jewett st, receiver  
Holmes, Charles W. 153 Varum ave, cabinet maker  
Hooper, George L. 7 Belmont st, insurance  
Horner, John P. 353 Westford st, manufacturer  
Howell, Wakefield D. 69 Nichols st, clerk  
Hoyle, Albert 124 Mt. Hope st, plumber  
Hubbard, George L. 332 Varum ave, real estate agent  
Hughes, Joseph 244 Thorndike st, grinder  
Humphriss, Frederick G. 70 Smith st, watchman  
Hunnewell John A. 54 Harvard st, superintendent  
Hunt, Gilbert W. 801 Stevens st, teamster  
Hunt, Leonard D. 234 Cabot st, overseer  
Hunt, William F. 88 Twelfth st, foreman  
Hunter, James F. 111 Liberty st, barber  
Huntington, Edward W. 218 Moore st, clerk  
Hurd, D. Glen 35 West Tenth st, inventor  
Husband, Thomas J. 31 Clark st, stable keeper  
Hyde, Daniel 42 Humphrey st, machinist  
Hyde, John J. 178 Pleasant st, toolmaker

## I

Ianson, Albert E. 1220 Lawrence st, loomfixer  
Ingalls, George W. 334 Boylston st, bookkeeper  
Inglis, John J. 52 Hampshire st, clerk  
Ireland, Willard F. 17 Schaffer st, machinist  
Irwin, John M. 83 Pine st, confectioner

## J

Jalbert, Joseph 100 Fourth ave, contractor  
Jameson, James A. 139 Concord st, machinist  
Jennings, Joseph 859 Lawrence st, retired  
Jennings, Thomas J. Jr. 33 South Whipple st, operative  
Jennison, George H. 378 East Merrimack st, dentist  
Jensen, Otto 19 Grove st, receiver  
Jodoin, Augustus J. 28 Campaw st, operative  
Johnson, Francis 494 Lawrence st, real estate  
Johnson, Franklin E. 215 Foster st, teller  
Johnson, Michael J. 328 Suffolk st, organist  
Johnson, Thomas 183 Wilder st, bookkeeper  
Johnston, William S. 173 Stackpole st, baker

## K

Keables, Nelson D. 14 Hoyt ave, mechanical superintendent  
Kearney, John 142 Third st, inspector  
Kearney, Redmond D. 142 Third st, salesman  
Keefe, George F. 101 Beech st, stable keeper  
Keefe, James 453 Lawrence st, barber  
Kelley, John J. 10 Second ave, conductor  
Kelley, Thomas F. 578 Andover st, clerk  
Kelley, William A. 799 Princeton st, Lowell Water Works  
Kelley, William M. 32 John st, janitor  
Kelly, Bernard J. 1 Dracut st, mason  
Kennedy, James J. 136 Walker st, liquor dealer  
Kennedy, William R. 114 Warwick st, electric light trimmer  
Keyes, Charles F. 79 Sherman st, auctioneer  
Killpartrick, Edwin W. 360 Wilder st, clerk  
Kilpatrick, John 107 South Loring st, carpenter  
Kilroy, John 99 Beech st, insurance agent  
King, Arthur F. 94 D st, merchant  
King, Francis T. 69 Chestnut st, butcher  
King, John C. 69 Chestnut st, clerk  
King, Joseph D. 67 Bartlett st, lather  
King, Walter 205 Stackpole st, clerk  
Kingham, David 33 West Meadow rd, bookkeeper  
Kingsbury, John M. 1087 Bridge st, meat market  
Kittredge, Abner L. 101 Myrtle st, merchant  
Kittredge, Horace V. 34 Third ave, mason  
Knowlton, Harry W. 24 Monadnock ave, draughtsman

## L

Labrie, Eugene 2-103 Tucker st, baker  
Laflamme, Gerdia J. 29 Queen st, clerk  
Lafleur, Frederick 197 White st, barber  
Lafleur, Harvey A. 58 Crawford st, collector  
Lambert, Arthur J. 1 Litchfield Terrace, clerk  
Lambert, Joseph M. 34 Gershom ave, printer  
Lamontague, Adolphe 809 Moody st, merchant  
Lamontague, Octave 125 Cross st, merchant  
Lamoureux, Auseline, 76 Mt. Washington st, tailor  
Lamoureux, Frederick A. 52 Mammoth rd, hardware dealer  
Lamson, Nathan P. 825 Merrimack st, clerk  
Lannan, Dennis H. 182 Merrimack st, clerk  
Lappen, John P. 7 State st, machinist  
Larochelle, Elzear J. 60 Beaulieu st, reporter  
La Rock, John 57 Marshall st, operative  
Latham, Frank W. 27 Apple st, clerk  
Latour, Peter 60 Crawford st, loomfixer  
Laurin, Carl G. 40 Lundberg st, stonecutter  
Lavallee, Henry 75 Gershom ave, jeweler  
Lavallee, Joseph H. 190 Pawtucket st, clerk  
Lavallee, Rosario 75 Gershom ave, jeweler  
Lavigne, Alexis 51 White st, printer  
Lavoie, Arthur 1 Regina place, grocer  
Law, Fred 32 State st, clerk  
Lawler, Thomas H. 72 Hanks st, treasurer  
Lawrence, Abbott 53 Berkeley ave, jeweler  
Leary, Daniel M. 22 Parkview ave, dyer  
Leary, Daniel J. 118 Mt. Washington st, plumber  
Leary, Dennis J. 786 Broadway, machinist  
Leary, Jeremiah F. 99 Pleasant st, janitor  
LeCam, Joseph H. 30 Haines ave, clerk  
Ledoux, Damase A. 758 Moody st, merchant  
Ledoux, Ovide 824 Moody st, merchant  
L'Ecuver, Joseph Hector 8-502 Moody st, clerk  
Leggat, William D. 648 Broadway st, machinist  
L'Heureux, Henry 119 Gershom ave, operative  
Leighton, James H. 78 Whitney ave, insurance  
Lelacheur, Jean B. 199 Mt. Hope st, merchant tailor  
Leonard, Terrance D. 271 Concord st, clerk  
Lewis, Edward J. 45 Abbott st, painter  
Lewis, Fred O. 47 Oakland st, druggist



Libby, Charles F. 69 Robbins st. superintendent  
Libby, David D. 162 Saunders ave, carpenter  
Light, Daniel Light ave, gardener  
Little, Edwin F. 815 Moody st, stock broker  
Livingston, Cornelius S. 208 Branch st, paymaster  
Long, Dennis A. 610 Andover st, publisher  
Loranger, Arthur 964 Middlesex st, operative  
Loranger, Louis 67 Branch st, clerk  
Lozeau, Napoleon M. 45 Endicott st, clerk  
Louporet, Leonel N. H. 26 Smith st, clerk  
Louporet, Rodolphel 26 Smith st, baggageman  
Lull, George E. 11 Nesmith st, merchant  
Lussier, Ferdinand 83 Lilley ave, operative  
Lussier, George H. 903 Moody st. operative  
Lussier, Rosario 83 Lilley ave, clerk  
Lussier, William O. 9 Bowen st, machinist  
Lynch, Thomas J. 8-33 So. Whipple st, insurance  
Lyons, John K. 7 Westford st, pin maker  
Lyons, Murthey 25 Cross st, clerk

## M

MacBrayne, Lewis E. 6 Belmont st, journalist  
Mack, Martin T. 18 Lenton ct, lunch cart prop.  
Magee, John J. 359 Lawrence st, grocer  
Maguire, Hugh 62 West Third st, bartender  
Maguire, John E. 35 Mead st, ins. agt.  
Maguire, Thomas F. 22 Varney st, solicitor  
Mahon, Thomas 116 West Sixth st, engineer  
Mahoney, John J. 41 Butterfield st, clerk  
Major, Frank A. 60 Rea st, secondhand  
Maloney, Michael J. 81 School st, coachman  
Maloney, Thomas 23 Church st, cook  
Mangan, Thomas J. 74 Chambers st, Bleachery  
Manseau, J. Calixte 172 School st, furnishings  
Manseau, Vidal Z. 269 Appleton st, clerk  
Mansfield, George F. 306 Wilder st, bookkeeper  
Mansfield, William S. 12 White st, preserves  
Mansur, Ezra E. 11 Fernald st, real estate  
Mansur, William L. 445 Merrimack st, clerk  
Marchand, Joseph P. 18 Sargent st, machinist  
Marden, Philip S. 11 Fairview st, editor  
Marden, Robert F. 68 Clark rd, reporter

Marin, Joseph 213 Pawtucket st, real estate  
Markham, Michael J. 142 Chapel st, liquor dealer  
Marshall, Arthur H. 538 Varnum ave, farmer  
Martell, Arthur J. 25 Nesmith st, music teacher  
Martell, Hormidas J. 799 Moody st, supt. wire works  
Martin, Edward F. 543 Gorham st, grocer  
Martin, Mizael 2-500 Moody st, tailor  
Martin, William F. 125 Nesmith st, tailor  
Mason, Charles 12 Smith st, machinist  
Mason, Lewis 12 Smith st, machinist  
Mathison, Charles W. 61 Tolman ave, manufacturer  
May, Thomas 1406 Varnum ave, gate tender  
Maynard, Myron A. 65 Norcross st, overseer  
McAleer, James E. 129 Llewellyn st, clerk  
McAloon, Fred F. 14 Pleasant st, weaver  
McAloon, John B. 112 Sixth st, weaver  
McAloon, William F. 321 High st, musician  
McCaffrey, John H. 186 Pleasant st, carpet weaver  
McCaffrey, Joseph F. 81 Bartlett st, agent  
McCann, Patrick 412 Lincoln st, dresser  
McCartin, Patrick 116 Pleasant st, conductor  
McCarthy, James F. Jr. 28 Butterfield st, clerk  
McCarthy, Patrick H. 20 Varney st, butcher  
McCarthy, John P. 15 Fay st, machinist  
McCormick, John E. 108 Livingston ave, clerk  
McCullough, John 281 High st, grocer  
McCurdy, Albert G. 295 Stevens st, printer  
McElholm, William H. 465 Westford st, plumber  
McEvoy, Edward T. 181 Moore st, druggist  
McGauvran, William H. 172 School st, clerk  
McGee, Thomas J. 109 4th ave, janitor  
McGenniss, James 23 Read st, insurance  
McGilly, Patrick 149 Concord st, wool sorter  
McGlinchey, Jeremiah 48 Chapel st, liquor dealer  
McGlinchey, Michael 1022 Gorham st, grocer  
McGregor, Fred G. 244 Parker st, auctioneer  
McGrevey, James M. 13 Burns st, water department  
McHugh, Michael 174 Fourth ave, clerk  
McHugh, William E. 390 Beacon st, carpenter  
McIntire, George E. 605 Wilder st, machinist  
McIntosh, George A. 85 Sanders ave, mechanic  
McKenna, George B. 13 Cosgrove st, undertaker



McKenna, George T. 882 Gorham st, conductor  
McKeon, James E. 184 Chelmsford st, clerk  
McKinnon, Murdock 15 Olney st, marketman  
McLaughlin, James 219 Stackpole st, gentleman  
McMahon, Frank 539 Chelmsford st, machinist  
McMahon, Joseph F. 456 Chelmsford st, plumber  
McManus, John 50 Bartlett st, constable  
McMaster, Frank E. 54 Jenness st, carpenter  
McMullen, Michael 20 Charles st, clerk  
McNabb, John H. 108 Pleasant st, laundry  
McNamara, John F. 133 Stackpole st, tailor  
McOsker, Thomas F. 23 Huntington st, cashier  
McQuaid, Arthur F. 197 Pleasant st, loomfixer  
McQuesten, Albert W. 118 D st, clerk  
Meagher, Dennis J. 11 Fay st, foreman  
Mealey, Frank L. 509 School st, stencil cutter  
Meaney, Joseph 45 Laurel st, engineer  
Meehan, Edward J. 289 Concord st, teamster  
Meehan, Joseph P. 228 Worthen st, clerk  
Mellor, George H. 60 Grove st, overseer  
Mercier, Ernest B. 36 Aiken ave, baker  
Merrill, Frank M. 156 Tenth st, selling agent  
Merritt, William H. 262 Concord st, drummer  
Mevis, George B. 58 Methuen st, clerk  
Miles, Charles F. 19 Third ave, dealer  
Miller, Joseph H. 284 Fletcher st, clerk  
Mirault, Alexander 5 Varney st, music teacher  
Miskella, James F. 56 Hanks st, student  
Mitchell, James W. 79 Mt. Washington st, carpenter  
Molloy, Andrew 339 Riverside st, overseer  
Monahan, Patrick R. 38 West Fifth st, teamster  
Mongeau, George E. 444 Fletcher st, merchant  
Moody, Percy H. 177 Stackpole st, clerk  
Mooney, Michael J. 203 Moore st, brakeman  
Mooney, William H. 203 Moore st, clerk  
Morin, Joseph U. 812 Merrimack st, merchant  
Morin, Ovilla 129 White st, dealer  
Morris, Thomas F. Jr. 76 West Third st, druggist  
Morrison, Willard C. 243 Mammoth rd, dealer  
Morse, Robert A. 347 Dutton st, shipping clerk  
Mullaney, John J. 219 Salem st, plumber  
Mullaney, Michael 483 Broadway, plumber

Mullen, Joseph 232 Moore st, merchant  
Muldoon, Thomas 427 Lincoln st, laborer  
Mulno, Harry O. 324 Boylston st, asst. superintendent  
Murphy, Frank B. 221 Foster st, insurance and real estate  
Murphy, James A. 86 Hanks st, overseer  
Murphy, Thomas F. 189 Parker st, plumber  
Murphy, Thomas J. 17 Orford st, clerk  
Murray, Frank 86 Fourth ave, blacksmith  
Murray, Justin J. 18 Dempsey pl, insurance  
Muzzey, Walter L. 25 Fort Hill ave, salesman  
Myers, James W. 21 Albert st, assistant superintendent

## N

Naylor, Charles 250 Wentworth ave, chemist  
Nealon, James F. 9-94 High st, machinist  
Nestor, Patrick F. 348 Stackpole st, lamplighter  
Nickerson, Albert M. 27 Seventeenth st, tailor  
Nolan, John H. 117 Fulton st, janitor  
Novell, Maurice H. 3-449 Moody st, barber  
Noyes, Fred W. 62 Lane st, railroad clerk  
Nugent, Micheal 13 L st, operative

## O

Oates, William 30 Crawford st, machinist  
O'Brien Daniel J. 90 Park View ave, clerk  
O'Brien, John J. 124 High st, slater  
O'Brien, John J. 399 Worthen st, foundryman  
O'Brien, Patrick 175 Broadway, laborer  
O'Connell, William E. 110 Bartlett st, goldsmith  
O'Connor, John J. 298 Riverside st, contractor-  
O'Connor, Maurice 635 Market st, laborer  
O'Connor, Michael J. 900 Gorham st, clerk  
O'Connor, Thomas F. 823 Lawrence st, agent  
O'Dowd, Henry J. 423 High st, carriage dealer  
O'Dwyer, Jeremiah J. 148 Midland st, conductor  
O'Flahaven. James Colonial ave, cor. Plymouth, real estate  
O'Hare, Frank 29 Bassett st, bartender  
O'Hare, James 27 Ellsworth st, teamster  
O'Hare, John P. 27 Abbott st, carpet weaver  
O'Heir, Octavien G. I. 68 Lane st, merchant  
O'Loughlin, John B. 59 Keene st, clerk

O'Loughlin, John J. 19 Bleachery st, machinist  
Osterhout, Fred S. 28 Bellevue st, retired  
O'Shea, Michael 213 Concord st, machinist  
O'Sullivan, Humphrey 105 Butterfield st, mfg. rubber heels  
O'Sullivan, James 105 Mt. Washington st, shoe dealer

## P

Paige, Charles D. 45 Thirteenth st, auditor  
Palmer, Forrest E. 51 Osgood st, bookkeeper  
Paradis, Jean M. 22 Riverside st, bartender  
Paradis, Peter 24 Nichols st, barber  
Park, Albert S. 28 Riverside st, driver  
Parker, Charles A. 13 Second st, painter  
Parker, Percy 880 Broadway, capitalist  
Parthenais, David A. 30 Phillips st, clerk  
Patten, Henry N. 235 Mammoth rd, bookkeeper  
Patten, William T. 205 Mammoth rd, dealer  
Pearson, George F. 24 Grace st, clerk  
Peltier, Edmund 801 Moody st, laborer  
Peltier, Ephrem 153 School st, dealer  
Peltier, Merrill 126 Avon st, dealer  
Peltier, Willis J. 803 Moody st, jeweler  
Penn, William Henry 262 West London st, builder  
Perham, George L. 53 Lamb st, provisions  
Perley, George E. 37 Varney st, bank teller  
Perreault, David 20 Fernald st, jeweler  
Person, Nils 105 London st, carpenter  
Peters, William B. 16 Bryant st, clerk  
Phelps, Archibald S. 50 Lamb st, machinist  
Pickering, H. Edward 4 Bertram st, manager knitting mill  
Pickering, Samuel A. 34 Hastings st, carpenter  
Pihl, Carl G. A. F. W. E. 45 Fay st, foreman  
Pinder, Albert L. 457 Lawrence st, carpenter  
Plante, Edmond 115 Acton st, driver  
Plummer, Rufus W. 39 Norcross st, engineer  
Pollard, Arthur G. 110 Mansur st, merchant  
Pollard, Harry G. 96 Mansur st, merchant  
Potter, William H. 251 Gibson st, cigar and tobacco dealer  
Prescott, Fred M. 68 Mt. Washington st, clerk  
Preston, Charles R. 335 Thorndike st, civil engineer  
Preston, James F. 403 Andover st, treasurer  
Prince, Arthur D. 5 Simpson st, merchant

Proctor, Charles S. 187 Hovey st, paper dealer  
Provost, Joseph 3 McIntire st, janitor  
Putnam, Addison 325 Rogers st, merchant  
Putnam, Alonzo, Jr. 19 Eighth ave, salesman  
Putnam, Frank E. 1210 Middlesex st, restaurant proprietor  
Putnam, Lewis A. 19 Eighth ave, clerk

**Q**

Queenan, Eugene C. 159 Howard st, clerk  
Quigley, John M. 542 Chelmsford st, teamster  
Quill, Daniel 78 Mt. Hope st, barber  
Quinn, Michael 14 Fort Hill ave, fruit dealer  
Quinn, Thomas F. 30 Weed st, steam fitter  
Quinn, Timothy 93 Bartlett st, foreman  
Quirbach, Henry C. 142 Gorham st, cigar maker  
Quirk, William 185 Adams st, laborer

**R**

Racette, John 32 Pawtucket st, manufacturer  
Rafferty, Michael T. 36 Cedar st, hack driver  
Rafter, Thomas B. 12 Walker st, motorman  
Randlett, Fred M. 110 Westford st, fish dealer  
Ranlett, Orrin B. 2d, 95 Sanders ave, grocer  
Ray, George H. 17 Oak st, upholsterer  
Read, George G. Jr. 14 Belrose ave, grocer  
Ready, William B. 10 Bertha st, barber  
Reardon, Patrick 95 Dummer st, laborer  
Redding, Daniel 45 Adams st, grocer  
Redmond, James J. 3 Masterson's yd, clerk  
Riensterna, Torsten 43 Sidney st, woolsorter  
Regan, Michael J. 649 School st, motorman  
Reidy, Martin H. Riverside st, manager Lowell Sun  
Reilley, Timothy 16 Alder st, barber  
Reilly, Peter W. 137 Hovey st, printer  
Reynolds, Bernard 174 Fourth ave, barber  
Rhodes, Arthur A. E. 524 Westford st, hairdresser  
Rhodes, Benjamin 12 Oak st, manufacturing  
Ricard, Francois Xavier 420 Fletcher st, jeweler  
Richards, Edward S. 255 Salem st, brakeman  
Richards, John B. 770 Moody st, clerk  
Richards, Joseph L. 255 Salem st, knitter

Richards, Lyman H. 129 Crawford st, carpenter  
Richburg, William H. 13 Robert st, shoe cutter  
Riddick, Herbert C. 77 A st, clerk  
Riley, Charles 65 Chestnut st, barber  
Riley, Luke J. 101 Third st, barber  
Riordan, Warren P. 58 Second ave, secretary  
Roach, Henry A. 211 Methuen st, retired  
Robarge, Emerson N. 282 High st, foreman  
Robert, Vital 33 Fifth ave, carpenter  
Robertson, John L. 470 Andover st, furniture dealer  
Rogers, James H. 563 Bridge st, optician  
Rogers, John F. 29 Cedar st, undertaker  
Rooney, John J. 151 Cabot st, superintendent  
Rountree, Alexander E. 96 Wentworth ave, salesman  
Rourke, Fred H. 777 Central st, coal dealer  
Rousseau, Napoleon C. 160 Hall st, merchant  
Rowland, Charles T. 5 Belmont st, wholesale grocer  
Roy, John B. 274 High st, foreman  
Royal, Garrett G. 362 Broadway, operative  
Runels, George H. 240 Gibson st, real estate  
Russell, John L. 17 Victoria st, manager  
Ryan, Albert J. 728 Westford st, real estate  
Ryan, Leonard M. 24 Eighth ave, clerk  
Ryan, Patrick J. 1 Goward ct, clerk  
Ryan, Thomas S. 42 Sidney st, printer

## S

Sabourin, David 15 Perrin st, pattern maker  
Safford, Arthur T. 30 Talbot st, engineer  
Salmon, Edward A. 18 Phillips st, overseer  
Sanborn, Fred W. 44 Fred st, carpenter  
Sanborn, Warren F. 260 Mansur st, foreman  
Sanderson, George W. 137 Stackpole st, clerk  
Sargent, George A. 49 Andover st, lineman  
Sarre, Leon E. 842 Varnum ave, picture framing  
Saunders, Thomas A. 325 Mammoth rd, undertaker  
Savard, Aime E. 311 Mammoth rd, baker  
Sawyer, Orrin A. 134 Walker st, inventor  
Scott, George N. 238 Chelmsford st, woodworker  
Scribner, George A. 158 Westford st, machinery dealer  
Shannessy, George W. 180 Grand st, wheelright  
Sharf, Charles 688 Broadway, candy store



Sheehy, James 3 Pleasant st, provision clerk  
Shepard, Charles S. 100 Hanks st, steam fitter  
Sherman, Arthur W. 46 Burt st, clerk  
Sherman, Leonard F. 148 Princeton st, shoe manufacturer  
Sherwell, William M. 2 Barton ave, paymaster  
Shields, William H. 52 Forrest st, carpet weaver  
Shoughro, Edward J. 33 Auburn st, barber  
Sicard, Armand T. 720 Moody st, shoemaker  
Sicard, Jean B. 130 Avon st, dealer  
Silcox, Samuel 19 Robert st, machinist  
Silver, Fred W. 94 So. Loring st, machinist  
Simpson, John A. 67 Methuen st, mason and contractor  
Smith, Charles P. 314 Nesmith st, real estate  
Smith, Chester F. 250 Foster st, traveling man  
Smith, Henry A. 12 Belmont st, insurance  
Smith, Henry 37 Varnum st, barber  
Smith, Lorenzo E. 122 Mammoth rd, city employee  
Smith, Omer J. 162 Fourth ave, janitor  
Smith, Orange V. 812 Stevens st, machinist  
Smith, Percy S. 104 Gershom ave, barber  
Smith, Thomas M. 184 Tenth st, clerk  
Smith, Walter N. 36 State st, weaver  
Smith, Walter S. 782 Merrimack st, clerk  
Smith, William J. 34 Bartlett st, operative  
Smithson, Angelo L. 383 E. Merrimack st, overseer  
Somerset, Alfred J. 104 Woodward ave, clerk  
Somerset, James S. 104 Woodward ave, janitor  
Speirs, James A. 715 Chelmsford st, overseer  
Sprague, L. Kirk 120 Sprague ave, mason  
Stanley, Harry L. 135 Beacon st, coal dealer  
Stanton, John B. 23 Newhall st, wool sorter  
Staples, George N. 50 Sixth st,  
Starr, George S. 144 High st, weaver  
Stevens, Almon P. 43 Hildreth st, janitor  
Stevens, Oliver 38 Wentworth ave, broker  
Stevens Winslow B. 18 Arthur st, carpenter  
St. Hillaire, James 66 Mt. Hope st, mason  
Stickney, Frederick W. 53 Third st, architect  
Stowell, Charles H. 99 Fairmount st, manager  
Stuart, Frank 79 Fort Hill ave, engraver  
Sturtevant, Augustus L. 32 Brookside st, clerk  
Sullivan, Cornelius 180 Broadway, barber

Sullivan, Daniel 99 Andrews st. merchant  
Sullivan, Eugene P. 84 Maple st, primer  
Sullivan, James H. 40 Third st, clerk  
Sullivan, Richard H. 28 Franklin st, teamster  
Swan, Albert J. Congress ave, druggist  
Swapp, Andrew G. 307 Pawtucket st, paymaster  
Sweatt, Albion 62 Eighteenth st, carpenter  
Sykes, Richard 11 Rockingham st, overseer

## T

Talbot, Harry L. 15 Fairview st, traveling salesman  
Tansey, John F. 10 Alder st, coachman  
Taylor, Samuel 12 Chase ave, watchman  
Tellier, Alderic 903 Moody st, clerk  
Tellier, George 12 Robert place, operative  
Theriault, Frederick 259 White st machinist  
Thibodeau, William W. 158 Riverside st, grocer  
Thissell, Walter F. 109 Mansur st, hardware  
Thomas, Charles R. 725 Stevens st, upholsterer  
Thomas, John 45 Tolman ave, carpet weaver  
Thompson, James A. 68 Grove st, box manufacturer  
Thompson, Perry D. 185 Andover st, lumber operator  
Thompson, Samuel H. 121 School st, hardware  
Thomson, John A. 89 Eighteenth st, hardware dealer  
Thorpe, James 100 Riverside st, treasurer Glass Co.  
Thurston, Albert E 90 Whitney ave, superintendent  
Tilton, Frederick N. 57 So. Walker st, janitor  
Tilton, George F. 252 Lincoln st, retired  
Toomey, Eugene F. 168 Lawrence st, clerk  
Toupin, Hercule A. 320 Hildreth st, druggist  
Tracy, James H. 281 Concord st, laborer  
Tremblay, Onesime 980 Moody st, operative  
Turcotte, Homer L. P. 526 Moody st, asst. janitor  
Turcotte, Louis P. 553 Fletcher st, liquor dealer  
Turcotte, Oswald, 33 Ellis court, baker  
Turner, Clarkson H. 23 Perrin st, foreman Gas Co.  
Tyrrell, John E. 483 Lawrence st, provision dealer



## V

Vallerand, Ernest J. 212 White st, operative  
Varnum, Thomas 476 Varnum ave, farmer  
Vigeant, Paul 48 Riverside st, grain dealer  
Vigneault, Edmond J. 476 Moody st, clerk  
Vigneault, Rodolphe J. 17 Phoebe ave, foreman  
Vining, Bert J. 36 Fourth ave, carpenter  
Vining, Hiram 36 Fourth ave, carpenter  
Vining, William J. 36 Fourth ave, carpenter  
Voisard, Hector 99 White st, clerk

## W

Wadleigh, Jude C. 305 Andover st, mill agent  
Walker, George H. 153 Wentworth ave, clerk  
Walker, George L. 137 Stackpole st, butcher  
Walker, Hugh G. 18 Phil st, clerk  
Walker, John J. 22 Lyon st, janitor  
Walker, Thomas C. 80 Chestnut st, druggist  
Walmsley, John 534 Central st, clerk  
Walsh, John F. 5 Watson st, salesman  
Washburn, John M. 266 Pine st, salesman  
Webster, Herbert E. 251 Foster st, salesman  
Weight, Francis W. 29 Second ave, machinist  
Weight, Henry J. 29 Second ave, operative  
Weilbrenner, Arthur 132 Branch st, clerk  
Welch, Richard J. 543 Andover st, plumber  
Welch, John 270 Livingston ave, plumber  
Welch, William F. 34 Cedar st, carpenter  
Wentworth, Ansel W. 35 Woodward ave, operative  
Westall, William E. 63 Dover st, merchant  
Weston, Charles F. 32 Colonial ave, belt maker  
Westwood, John S. 26 A st, druggist  
Whelton, Matthew 288 Westford st, wine clerk  
Whipple, Simon F. 40 Berkeley ave, advertising manager  
Whitcomb, Irving 16 Barclay st, clerk  
Whitcomb, Winfield 91 Hastings st, clerk  
White, Edward C. 291 Concord st, tailor  
White, John F. 79 Llewellyn st, clerk  
White, William T. 86 Belmont ave, manufacturer of leather  
Whittet, David W. 34 Wentworth ave, carpenter

Whittier, Stephen T. 26 Hanks st, paymaster  
Whitworth, Albert 21 Sidney st, clerk  
Wiggin, Burton H. 1010 Middlesex st, contractor  
Wiggin, Frank B. 76 Canton st, bookkeeper  
Wilder, Charles W. 291 Wilder st, provisions  
Wilder, Edward T. 1000 East Merrimack st, teller  
Wilder, Wesley M. 24 Coral st, hay and grain dealer  
Wilder, William H. 187 Pleasant st, woolen weaver  
Wilder, William F. 20 Huntington st, plumber  
Williams, Henry J. 354 Pine st, engineer  
Williams, Charles M. 100 Livingston ave, banker  
Willman, Clarence T. 5 Butler ave, spinner  
Wilmot, Joseph 847 Moody st, teacher  
Wing, Charles H. 795 Stevens st, merchant  
Wilson, Charles V. 89 Westford st, foreman  
Wilson, Joseph C. 22 Seventh ave, dealer  
Wilson, Joseph M. 22 Seventh ave, dealer  
Winn, John J. 29 So. Whipple st, mattress maker  
Wirt, Edward R. 258 Wentworth ave, salesman  
Worthen, George E. Jr. 27 Forrest st, clerk  
Wotton, Charles A. 76 Loring st, hay and grain dealer  
Wright, Frank B. 57 Willow st, carpenter  
Wyman, Randall T. 62 Middlesex st, lodging house  
Wyman, Stephen T. 185 Stackpole st, city library

## Y

Yates, Edward 62 Chestnut st, operative  
Young, Charles F. 627 Central st, decorator  
Young, Charles M. 391 Stevens st, undertaker

HUGH C. McOSKER, Chairman  
J. OMER ALLARD,  
JAMES H. ROONEY,  
STEPHEN FLYNN,

Board of Registrars of Voters





# ANNUAL REPORT OF THE POLICE DEPARTMENT

*For the Year Ending*

*DECEMBER 31, 1912.*



LOWELL, MASS.  
LAWLER PRINTING COMPANY  
29 PRESCOTT STREET  
1913





# ANNUAL REPORT

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OFFICE OF THE MAYOR OF LOWELL,  
Lowell, Mass., June 11, 1913.

To the Municipal Council,  
City of Lowell.

Gentlemen:

The annual report of the Police Department for the year ending December 31, 1912, is herewith respectfully submitted.

## THE YEAR'S WORK

The year's work of the Police Department has been satisfactory. With the adoption of the new city charter the department passed from the control of the police board to that of the Mayor, as head of the Public Safety Department, and under the new order the affairs of the department have been administered in a manner that would appear to defy adverse criticism, except that inspired through ulterior motives, the men in the ranks co-operating cheerfully with their superior officers and the latter in turn with the head of the department in the performance of duty.

## STRIKE SERVICE

An unusual line of work at which the department distinguished itself was in strike service performed in this city and in Lawrence. Early in the year one of the most serious labor troubles that has ever darkened the pages of industrial history occurred in Lawrence and the police department of that city being unable to handle the situa-

ation made requisition through the Mayor of Lawrence for police assistance from this city. A battalion of patrolmen and several superior officers were sent to the downriver city where they soon established an enviable reputation for coolness and discipline and ability to maintain order. Later a strike was declared in Lowell under similar auspices and leadership but it was admirably handled by the local department without the necessity of going outside for aid and none of the riotous scenes that characterized the Lawrence disturbances were permitted in this city.

### DISCIPLINE AND ORDER

Upon assuming charge of the department the Mayor, believing that hope of reward is a strong incentive to duty changed a long-existing custom of the department and instead of rewarding officers for meritorious service by verbal commendation read at roll call gave them days off without loss of pay, a practice which was pleasing to all concerned and which is being carried out without loss to the city. It is a matter of record that the number of patrolmen thus commended during the year outnumbers the number reprimanded, the latter being comparatively few.

Relative to the subject of reprimanding officers for violation of the police rules the mayor is seriously considering a radical departure from the old method of dealing with such cases. At present the custom is to suspend the offending officer for a definite period during which time he loses his pay. In most cases of such suspension the officer remains in idleness throughout the period, his earning capacity being temporarily nullified. In the case of the officer thus penalized, who has a family depending upon him, innocent persons are likely to suffer, which is by no means the intention of the head of the department. Fortunately, cases requiring suspension are very rare, but in the future should it be necessary to reprimand an offi-

cer for a serious violation of the rules, the offending officer will be required to work without pay for a definite period in addition to performing his regular work. That is to say, that while he will draw his regular salary he will be required to perform extra work for which he will receive no compensation.

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## EFFICIENCY OF DEPARTMENT

The police department at the present time vies with any other in the state in general efficiency. But that efficiency must be increased as the city grows and improved methods come into vogue. This year a traffic squad was established, in an embryo state it is true, but such as it is, it has shown good results in the congested sections of the city. It is the mayor's intention to have a permanent traffic squad as soon as conditions warrant the appointment of the additional number of officers that will be required. There is need for better police protection at our public breathing places, particularly at the South Common. With a view to increasing the efficiency of the department the Mayor has arranged with City Physician Dr. M. A. Tighe, to give a series of lectures on first aid to the injured and similar subjects which undoubtedly will be productive of good results. The adoption of a motor-propelled police patrol has been a distinct advantage to the department but there is still room for great improvement. The present patrol wagon is big and cumbersome and its upkeep is decidedly expensive. In a few years a new vehicle will be necessary and then a lighter and less expensive car will answer the purpose. It is the Mayor's intention, in the interest of efficiency to equip the department with two motor-cycles to take the place of the old-fashioned bicycles still in vogue. The motorcycle can cover much more territory than the bicycle and will be of great value in properly covering the outlying districts. It is the Mayor's intention to abandon the old-fashioned and cum-

bersome helmets that have been worn by the members of the department for many years and to substitute therefor a lighterweight and more comfortable and attractive cap.

### PROTECTING EQUIPMENT

During the year, for the first time in the history of the department, insurance has been placed not only on the police station building but also upon the equipment of the department including the valuable Gamewell Signal Machine and the Bertillon and Finger-print equipments on none of which has there been any insurance in the past.

### NEEDS OF POLICE STATION

The interior of the Police Station is sadly in need of renovation as may be seen from the following recommendations made by Health Inspectors Stephen Garrity and William H. Connors, in a report to the Inspector of Buildings to whom complaint was made relative to unsanitary conditions existing in the cell rooms of the Police Station. The Health Inspectors after describing the conditions as they found them reported as follows:

We would earnestly recommend the present water-closets be discarded, and that the kind known as "extra heavy vitreous china-ware" without seats, and to be automatically flushed, be substituted, so as not to depend upon the attendant to pull chains; that the floor of each cell be paved with some non-absorbent material with cess-pool in each, and hot and cold water provided to clean and properly flush the same; the chipped enamel, broken seats, rough and uneven floors make ideal lodging places for germs that may follow large deposits of vomit, sputum, etc., and that an exhaust system of local ventilation be installed.

From the above recommendations it would appear that interior improvements are absolutely necessary.

## CONCLUSION

The Lowell Police Department as constituted and operated today vies with any in the commonwealth and should command the confidence and respect of every citizen. As a result of the stringency of the Civil Service Regulations the young men who are receiving the appointments at the present time are a superior lot, mentally and physically, while the older members have profited by the experience of years. The Police Department's mission is to guard and preserve the public peace and safety. Its members are servants of the public. The public is entitled to their best efforts in preventing and running down any infractions of the law, serious or trivial while they in turn should receive the respect and co-operation of the public. There are times when individual officers disregard their obligations to the public and make themselves offensive in manner or address, a fault which cannot and will not be condoned by their superiors; while there are also times when the public, through interested representatives, is not fair with the police. Whenever an officer exceeds his authority or in any way offends, the offended party may find redress from the Commissioner of Public Safety. But when the fault lies with the public, the officer has no redress. The public therefore should aim to be fair in all its dealings with the police, and the police will be required to be fair in all of their dealings with the public. The police are at the service of the public at all hours and if the officer on the beat is not available a telephone message to headquarters—4123—will be courteously received and promptly acted upon.

In closing, the Commissioner of Public Safety desires to compliment the department for the general high standard maintained during his incumbency as head of the department.

**PATROLMEN APPOINTED**

April 10, 1912, John J. Guthrie was appointed to the probationary reserve force.

April 8, 1912, James J. Noonan and Michael J. O'Neil were appointed to the probationary reserve force.



# Necrology

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Patrolman Daniel W. Cogger, died March 25, 1912. He was appointed to the reserve force December 28, 1892, and promoted to the regular force December 21, 1894.

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Patrolman William G. Bumps died May 16, 1912. He was appointed to the reserve force March 30, 1881, and promoted to the regular force October 25, 1881.

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Patrolman Peter T. Corcoran, died June 7, 1912. He was appointed to the reserve force February 3, 1880, and promoted to the regular force February 8, 1881.

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Inspector Charles Laflamme, died November 21, 1912. He was appointed to the reserve force March 8, 1881, promoted to the regular force September 13, 1881, and promoted to Inspector January 15, 1885.

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Patrolman James A. McQuade, retired, died March 15, 1912. He was appointed to the reserve force January 1879, promoted to the regular force February 3, 1880, and transferred to the pension roll on April 7, 1910.

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STATISTICAL REPORT

*OF THE*

Lowell Police Department

January 1, 1912—December 31, 1912

## RECORD OF ARREST, 1912

## AGAINST PUBLIC ORDER, ETC.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Adultery .....	2	3	1	2	3	4	5	2	2	1	12	5	20
Bastardy .....	1	2	2	2	1	2	2	1	2	2	1	1	12
Ball playing on the Lord's Day		15							5				5
Present at game on Lord's Day										18	9		42
Being present where gaming implements were found .....				4			11						15
Being present at game of crap on Lord's Day .....							2		1				3
Carrying Weapons .....		3				1			1		1		6
City Ordinance (violating) .....					1								1
Capias .....	2	1	2	2	1	1	1	1	2	2	2		16
Dancing on the Lord's Day .....							2						2
Deserter .....													1
Discharging fire arms in City											2		2
Disturbing the peace .....		1			14		2		2		1		20
Dog keeping unlicensed .....									1				1
Drunkenness .....	204	199	306	225	277	273	354	357	310	268	309	285	3367
Escaped from prison .....		5	4			2						1	12
Evasion car fare .....				1									1
False statement obtaining marriage certificate .....						1							1
Failure to comply with school laws .....			1										1
Fornication .....	2				2		5		3	2			14
Gaming on the Lord's Day .....		7											7
Giving false answers to stable keeper .....								1					1
Hunting with a ferret .....											1		1
Insane .....	1		3			1	1			1	1	1	9
Indecent exposure .....							1	1					2
Illegal voting .....												1	1
Lewdness .....	1	2			1		2	1					7
Lewd Cohabitation .....				3			2	2			6	2	15
Liquor laws violating .....				1			1		1				3
Maintaining gaming house .....				1									1
Neglected child .....											1		1
Neglect of family .....	1	5	4	4	3	4	9	5	7	10	1	9	62
Obstructing sidewalk .....		1						1		1	3		6
Obstructing street .....			2		1				1				4
Peddling unlicensed .....					1	1	2						4
Permitting child to grow up without education .....											1		1
Playing music for dancing on Lord's Day .....							4						4
Polygamy .....				1		1			1				3
Profanity .....									1	1			2
Riding bicycle on sidewalk .....								2					2
Ringling false alarm of fire .....										1			1
Safe keeping .....	5	3	6	2	4	3	14	6	4	13	8	2	70
Sodomy .....						1							1
Soliciting Aid .....										4			4
Surrendered .....				1			1						2
Suspicious person .....	34	25	31	22	17	24	41	28	19	22	13	23	299
Stubbornness .....	2			1	4	2		3	1				15
Throwing missiles in the street							1						1
Truant .....		1											1
Unlicensed Vendor .....								2					2
Vagrants .....	3	1		1		2	1		1	3	1	1	14
Totals .....	258	271	362	270	329	317	448	425	361	336	367	344	4088

## AGAINST THE PERSON

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Assault.....	4	12	11	20	11	16	15	9	11	12	11	9	141
Assault Felonious .....								2					2
Cruelty to a cow.....									1				1
Intimidation.....			1		2								3
Manslaughter.....							1						1
Murder Attempt .....									1				1
Robbery.....										1	1		2
Seduction .....										1			1
Threats .....	1	1		2	2	1	4	2	1	2	1	2	19
Totals .....	5	13	12	22	15	17	20	13	14	16	13	11	171

## AGAINST THE PROPERTY

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Breaking and Entering .....	1		1	2	4	1	1	2	10		3	2	27
Breaking Glass .....			1								1		2
Destroying property .....				1									1
Embezzlement.....										1		1	2
Fraud .....										1			1
Injuring personal property.....								1		1			2
Larceny.....	13	12	14	20	8	16	15	14	16	11	11	12	162
Removing baggage.....				1	2		1						4
Riding on freight train .....								3					3
Sale of mortgage property .....				1	1							1	3
Setting fire.....				1				1					2
Suspicion of break'g & enter'g .....				1									1
Suspicion of larceny .....			1		1	3	2	4	2	3			16
Taking a team.....										1		1	2
Trespass .....		21			1			3	7				32
Totals.....	14	33	17	27	17	20	19	28	35	18	15	17	260

## DISTRIBUTION OF OFFENCES ACCORDING TO SEX AND NATIONALITY

	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Men.....	243	281	345	278	321	311	427	404	342	322	345	330	3949
Women.....	22	20	32	21	25	30	40	39	38	26	31	30	354
Minors.....	12	16	14	17	15	13	20	23	30	22	19	12	213
Non-Residents.....	102	77	122	94	100	96	164	155	107	123	121	122	1383
United States.....	131	144	163	126	154	146	210	205	181	167	165	169	1961
England.....	17	20	20	14	25	24	22	19	27	20	22	15	255
Ireland.....	52	56	97	65	71	86	100	100	70	79	86	68	930
Scotland.....	5	5	4	6	7	4	12	8	8	9	8	10	86
British Provinces.....	38	36	57	40	38	45	83	72	66	42	41	50	608
Greeks.....	4	3	3	7	26	13	12	12	6	4	26	19	132
Russia.....	16	11	32	26	11	12	24	26	32	27	21	18	256
Turkish Empire.....	2	29	1	1	1	1	1	1	2	1	1	1	38
Miscellaneous.....	16	12	14	31	19	23	23	24	18	21	26	23	250
Totals.....	277	317	391	316	361	354	487	466	410	370	395	372	4516

## DISTRIBUTION OF OFFENCES ACCORDING TO TRADES AND PROFESSIONS.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Building Trades.....	21	19	19	18	28	22	26	50	25	25	25	19	297
Mechanical Trades.....	29	22	33	30	32	15	36	30	27	39	28	20	341
Mill and factory.....	101	94	145	105	138	125	185	146	164	113	142	149	1607
Shops and stores.....	15	11	11	14	10	9	19	18	19	13	22	16	177
Professional.....	1	1	3	3	2	2	1	1	1	2	1	2	19
Agricultural.....	6	6	9	9	5	13	12	8	16	7	9	10	110
Clothing and Garb.....	1	1	1	1	1	1	1	1	1	1	1	1	11
Agents, etc.....	2	2	10	10	12	6	4	3	3	2	1	1	30
Laborers.....	67	129	135	98	95	113	148	150	114	135	130	114	1428
Service, Domestic, etc.....	16	12	19	11	18	18	26	30	18	14	21	15	218
Transportation.....	15	17	12	13	18	13	21	20	15	10	13	22	189
Children.....	1	1	1	1	5	2	2	1	1	6	2	1	22
Miscellaneous.....	1	1	1	1	1	8	1	1	1	1	1	1	10
None.....	6	3	5	5	5	8	6	12	4	4	1	3	62
Totals.....	277	317	391	316	361	354	487	466	410	370	395	372	4516

DIVISIONAL REPORTS

*OF THE*

Lowell Police Department

January, 1912—December, 1912

# MONTHLY REPORT OF PATROLMEN, 1912

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Persons assisted home drunk .....	18	18	31	15	26	16	18	27	17	14	27	30	257
Persons arrested.....	186	168	238	187	258	251	302	285	274	240	230	252	2891
Cases of Contagious Diseases.....	1												1
Sudden death.....		2	1	1	1	2	1						8
Violation of Liquor Law .....							2						3
Buildings found open and secured.....	78	73	101	63	72	87	62	60	77	76	75	83	907
Defective streets and sidewalks .....	4	10	40	1	35	12	59	22	12	13	8	5	238
Fire alarms given.....	4	2	1	2		3	4		12	1	1	3	23
Lost children restored.....	2			7		18	15	5	4	10	9	4	95
Value of stolen property recovered.....			7			13							
Gas lights not burning.....	\$2.15	\$1.30	\$9.98	\$87.00	\$13.35	\$18.91	\$23.00	\$8.00	\$121.00	\$31.00	\$16.50	\$147.25	\$479.44
Electric lights out.....	677	676	149	24	22	10	24	21	7	54	24	37	1734
Teams put up and cared for.....	238	203	231	254	159	130	223	233	166	358	224	140	2589
Obstructions not lighted.....	4	3		1	7	3	2	6	2	1	4	3	30
Obstructions removed.....	5	2	6	4	1	14	10	6	14	11	10	5	34
Disturbances quelled.....	1	4	1	1	2			6		2	5		22
	30	52	46	27	35	37	42	60	45	25	43	52	494

# REPORT OF KEEPER OF LOCKUP, 1912

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Money taken from prisoners.....	\$565.69	\$823.33	\$828.99	\$633.44	\$562.60	\$548.16	\$1183.61	\$1005.76	\$848.44	\$767.45	\$943.70	\$976.83	\$9688.00
Defective streets and sidewalks .....	2	3	16	21	12	14	67	17	25	10	7	9	203
Obstructions removed from street .....	5		4	3	2	8	10	7	7		13	6	65
Store doors found unlocked .....	80	74	104	71	93	107	61	73	86	99	84	86	1018
Lost children restored to parents.....		1	3	3	2		6		1	4	4	4	25
Stray teams found and put up.....		2			2	5	1	4	3	1	4	3	28
Washouts.....					8								8



MONTHLY REPORT OF POLICE MATRON OF ARRESTS OF WOMEN 1912

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Adultery.....	1		1				1	2	2		1		8
Assault and Battery.....			1	2			2	1					6
Attempt Murder by Poison.....						1			1				1
Bigamy.....													1
Breaking Glass.....													1
Drunkenness.....	19	18	24	15	23	31	36	40	33	16	26	27	308
Fornication.....	1		1		1		3		2	2	2		9
Insane.....							1						4
Illicit Cohabitation.....													2
Larceny.....			2		1	4				1	1	1	11
Lewd and Lascivious Cohabitation.....	1	2					3	2			3		11
Lewdness.....				1									1
Neglect of Child.....		1	1				1			1			4
Safe Keeping.....	1		2	1			5	1	1				11
Selling Mortgage Property.....					1								1
Subbornness.....					1	1	1						4
Suspicious Person.....							1					2	1
No. Arrested.....	23	22	32	19	27	37	53	46	39	22	33	31	384
No. of Minors.....	1	2	1	1	1	1	2	1	1	2	1	2	16
Money taken from and returned to women	\$23.87	\$2.55	\$22.64	\$1.49	\$10.98	\$8.81	\$251.75	\$5.91	\$11.22	\$3.40	\$19.97	\$6.83	\$369.42

## REPORT OF CRIMINAL BUREAU OF INVESTIGATION FOR YEAR 1912.

MONTHS	Arrests	Lost and Stolen	Recovered	Still Missing
January.....	28	\$ 827 00	\$ 721 00	\$ 106 00
February.....	26	902 00	798 00	104 00
March.....	29	657 00	598 00	59 00
April.....	30	721 00	679 00	42 00
May.....	24	680 00	622 00	58 00
June.....	27	578 00	515 00	63 00
July.....	23	729 00	618 00	111 00
August.....	29	812 00	705 00	107 00
September.....	31	760 00	590 00	170 00
October.....	24	856 00	740 00	116 00
November.....	28	780 00	690 00	90 00
December.....	32	930 00	815 00	115 00
<b>TOTAL .....</b>	<b>331</b>	<b>\$9,232 00</b>	<b>\$8,091 00</b>	<b>\$1,141 00</b>

## Property recovered for other Cities and Towns.

Lawrence, Mass.....	\$ 470 00
Westford, Mass.....	18 00
Nashua, H. N.....	26 00
Providence, R. I.....	25 00
Bedford, Mass.....	7 00
Reading, Mass.....	300 00
N. Andover, Mass.....	350 00
Winchester, Mass.....	35 00
Tilton, N. H.....	25 00
Manchester, N. H.....	12 00
Ayer, Mass.....	20 00
Boston, Mass.....	465 00

**Total..... \$1,753 00**

## Arrested for other Cities and Towns

Lawrence, Mass.....	5
Boston, Mass.....	11
Nashua, N. H.....	3
New Bedford, Mass.....	1
Manchester, N. H.....	4
Concord, Mass.....	1
Haverhill, Mass.....	2
Woburn, Mass.....	1
Tilton, N. H.....	1
Exeter, N. H.....	1
Winchester, Mass.....	1
<b>TOTAL.....</b>	<b>31</b>

## REPORT OF POLICE SIGNAL SYSTEM, 1912.

MONTHS	Duty Calls	Telephone Calls	Wagon Calls	Prisoners	Miles
January.....	41,703	3,454	178	207	108
February.....	37,385	3,116	188	246	229
March.....	39,175	3,386	261	324	293
April.....	35,253	3,112	209	251	252
May.....	36,583	3,302	270	310	341
June.....	35,625	3,272	273	314	340
July.....	36,883	3,393	335	413	397
August.....	36,857	3,026	348	408	434
September.....	35,039	3,144	294	344	361
October.....	38,074	3,561	265	295	331
November.....	38,244	3,389	277	337	309
December.....	40,321	3,443	257	298	296
<b>TOTAL.....</b>	<b>451,142</b>	<b>39,598</b>	<b>3,155</b>	<b>3,747</b>	<b>3,691</b>













report it.  
No claim for rebate of fine will be allowed  
if the borrower does not receive notice from the library, or on  
receipt of notice sent to the library of intention to re-  
turn the book.

**The record below must not be made or altered  
by the borrower.**

N 15				





